U.S. Fish & Wildlife Service

Migratory Bird Hunting Activity and Harvest during the 2021–22 and 2022–23 Hunting Seasons

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Hunter setting decoys
USFWS/Milton Friend

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Abstract: National surveys of migratory bird hunters were conducted during the 2021 and 2022 hunting seasons. Hunters of the following types of migratory birds were surveyed: waterfowl (family Anatidae), doves (mourning [*Zenaida macroura*] and white-winged [*Z. asiatica*]), band-tailed pigeon (*Patagioenas fasciata*), American woodcock (*Scolopax minor*), Wilson's snipe (*Gallinago delicata*), American coot (*Fulica americana*), gallinules (common gallinule [*Gallinula galeata*] and purple gallinule [*Porphyrio martinicus*]), and rails (king rail [*Rallus elegans*], clapper rail [*R. crepitans*], Virginia rail [*R. limicola*], and sora [*Porzana carolina*]). About 1 million waterfowl hunters harvested 9,459,400 (± 4%) ducks and 2,647,600 (± 5%) geese in the 2021 season, and about 1 million waterfowl hunters harvested 8,241,800 (± 5%) ducks and 2,176,800 (± 11%) geese in the 2022 season. Mallard (*Anas platyrhynchos*), green-winged teal (*A. crecca)*, blue-winged/cinnamon teal (*Spatula discors* and *S. cyanoptera*), gadwall (*Mareca strepera*), and wood duck (*Aix sponsa*), were the most-harvested duck species in the U.S., and Canada goose (*Branta canadensis*) was the predominant goose species in the goose harvest. Approximately 642,800 hunters harvested 9,202,100 (± 6%) mourning doves in 2021 and 625,000 hunters harvested 8,254,600 (± 7%) in 2022. Woodcock hunters numbered about 94,500 in 2021 and 105,000 in 2022, and harvested 214,800 (± 20%) in 2021, and 177,900 (± 16%) woodcock in 2022. About 13,200 people hunted snipe in 2021 and 22,500 in 2022, and they harvested 47,900 (± 54%) and 90,400 (± 50%) snipe in 2021 and 2022, respectively. Coot hunters (about 22,000 in 2021 and 42,700 in 2022) harvested 88,600 (± 42%) coots in 2021 and 194,000 (± 43%) in 2022. Gallinule hunters (about 8,000 in 2021 and 2,600 in 2022) harvested 5,700 (± 106 %) in 2021 and 24,000 (±130 %) in 2022. Approximately 13,200 rail hunters harvested 43,700 (± 70%) rails in 2021 and 5,300 rail hunters harvested 34,800 (± 100%) rails in 2022.

Introduction

In the 1952-53 hunting season, the U.S. Fish and Wildlife Service (FWS) began conducting a survey of Federal Duck Stamp purchasers to estimate waterfowl hunter activity and harvest in the United States. That survey was conducted annually through the 2001-02 hunting season, after which it was replaced by a new migratory game bird harvest survey system. In 1992, the FWS and State Fish and Wildlife Agencies (States) established the Migratory Bird Harvest Information Program (HIP), which was fully operational nationwide by 1999 (Elden et al. 2002). This cooperative State-Federal program requires licensed migratory game bird hunters to register annually in each state in which they hunt. Each State is responsible for collecting the name, address, and date of birth from each migratory bird hunter, asking each of them a series of general screening questions about their hunting success the previous year, and sending this information to the FWS. The States are also responsible for providing migratory bird hunters with proof of compliance to carry while they are hunting. The FWS is responsible for using these data to conduct annual national migratory game bird hunter activity and harvest surveys.

This report presents hunter activity and harvest estimates from the HIP surveys for the 2021-22 and 2022-23 hunting seasons. These estimates are preliminary, pending (1) final counts of the number of HIP registrants in each state each season, and (2) complete audits of all survey response data.

HIP Survey Design and Methods

Sample Frame. The HIP sample frame consisted of people who identified themselves as potential migratory game bird hunters when they purchased State hunting licenses. The States forwarded the sample frame data to the FWS 2 to 3 times a month, starting in August and continuing through the end of their migratory bird hunting seasons. People who hunted migratory birds in more than one state had to comply with the HIP requirement in each state in which they hunted. Thus, the sample frame was specific to each state.

Stratification and Sample Selection. States asked each migratory bird hunter a series of short screening questions about the species they hunted and their hunting success the previous year. The list of species or species-groups involved (dependent on seasons in each state) included ducks, sea ducks, geese, brant, doves, band-tailed pigeons, woodcock, coots and snipe, rails and gallinules, and sandhill cranes. The FWS used this prior-year information as a predictor of their current year hunting activity and success to assign each hunter to a success/activity stratum for each of the 10 species or species-groups based on his or her answers to the screening questions. From each State list the FWS selected stratified samples for each species or species-group. The FWS conducted 5 separate harvest surveys to estimate hunter activity and harvest of: (1) waterfowl (ducks, sea ducks, geese, and brant), (2) doves and band-tailed pigeons, (3) woodcock, (4) snipe, rails, gallinules, and coots, and (5) sandhill cranes. For the waterfowl and dove surveys, sampling rates were equal among success/activity strata; for the other surveys, sample rates were highest for active/successful hunters, and lower for the very large group of hunters who rarely if ever hunt the species or species group.

Survey Methodology. The 2022-23 hunting season was the first year of full implementation of the online harvest survey (www.fws.gov/harvestsurvey). All hunters were invited to take the survey online, but paper forms were sent out to those who requested them. The online survey asked for the same information as the paper survey, except that hunters could choose to enter daily records or season totals, but not both. As with the paper survey, contact before or early in the hunting season, and a daily hunting diary format were emphasized in an effort to reduce memory and prestige bias, both of which result in overestimation (Atwood 1956). Hunters selected for the surveys were asked to record the date of each hunt, the state and county where they hunted, and how many birds of various species or species-groups they personally bagged that day. For hunters who forgot to record their daily hunting information throughout the season, or did not receive the invitation until after the hunting season began, an option was provided to record season totals. Hunter response was voluntary.

Soon after the initial batch of names and addresses was received from a State, stratified samples were selected according to predetermined sampling rates. All surveys were conducted using a modification of Dillman's Total Design Method for mail surveys (Dillman 1978, Dillman 1991) to maximize survey response and ensure quality and timely responses. A survey email invitation was sent to each selected hunter within one to two weeks after his/her name was received, followed every 6 days by 3 additional email invitations and a paper invitation if the hunter did not respond. If no email addresss was received for the hunter, up to 3 paper invitations were sent in the mail. The sample selection and initial mailing process continued with each subsequent batch of names and addresses (roughly twice per month), with the last initial mailing occurring on or shortly after the date the season closed in the state. Up to three email reminders were sent at the close of the season reminding sampled hunters to submit their responses and thanking them for their help.

Analysis. Standard analyses for stratified samples (Cochran 1977, Steele and Torrie 1980) were used to obtain estimates of harvest and hunter activity for each state and species or species-group combination. The proportion of respondents who hunted (active hunters), their average days hunted and their average seasonal harvest were calculated and the corresponding totals estimated (active hunters, days hunted, birds bagged) at the state level. Variance estimates for these parameters were also calculated and converted to 95% confidence intervals. The number of days afield and the number of birds harvested were also estimated at the management unit and national levels, along with their corresponding 95% confidence intervals. However, the total number of active hunters (and any averages per active hunter) could not be estimated at the management unit or national levels because some people hunted migratory birds in more than one state. To calculate total numbers at larger geographic scales, we summed the number of active hunters in each state. This may overestimate the total number of active hunters because hunters are required to register for HIP in each state in which they hunt migratory birds.

Parts Collection Surveys

The FWS has conducted a cooperative Waterfowl Parts Survey annually to estimate the species, age, and sex composition of the duck harvest since 1961, and the species and age composition of the goose harvest since 1962. Hunters who agreed to participate in this survey were provided with large, postage-paid "wing envelopes" and were asked to send us a wing from each duck and brant they shot and the tail feathers and primary feather tips from each goose they shot throughout the hunting season. They were also asked to report the state, county, and date of harvest for each specimen they submitted. After the waterfowl hunting seasons ended, FWS and State biologists examined the specimens to determine the species, age, and sex of the birds. This past hunting season, due to supply chain shortages we did not receive printed envelopes until after the beginning of the hunting season. We sent fewer envelopes to new hunters, and sent postcards asking returning hunters to use any leftover envelopes until we could send them envelope packets.

Species composition estimates derived from the Waterfowl Parts Survey were combined with harvest estimates from the HIP waterfowl survey to calculate species-specific duck and goose harvest estimates. Similarly, date information provided by Waterfowl Parts Survey participants was combined with HIP survey results to estimate special September season duck and goose harvests. Estimates of the number of immatures per adult in the harvest (age ratio), and the number of males per female (sex ratio) were calculated for each species and state. Because sampling intensity varied among states, state ratios were weighted by harvest estimates from the HIP waterfowl survey to obtain flyway and U.S. ratios.

The FWS has conducted a Woodcock Wing Survey annually since 1977, primarily to estimate the age and sex composition of the woodcock harvest. Age and sex ratio estimates obtained from the woodcock wings collected in 1963-2022 were reported in "American woodcock population status, 2023" (Seamans and Rau 2023). This survey was expanded in 1997 to include rail wings to determine the species composition of the rail harvest, and band-tailed pigeon wings to obtain age ratio estimates.

Beginning in 2007, the FWS has performed a national Mourning Dove Parts Collection Survey to determine an index of recruitment. Selected hunters were asked to send in a wing from mourning doves harvested during the first two hunts of the season. Pooled age ratios from 2009-2022 were reported in "Mourning dove population status, 2023" (Seamans 2023).

Survey Results

Waterfowl Hunter Activity and Harvest (Tables 1-7, Figures 1-3). HIP waterfowl harvest survey sample sizes and response rates were 105,425 hunters and 25%, respectively, for 2021-22, and 233,398 hunters and 18% for the 2022-23 survey. Species-specific estimates for ducks and geese (Table 1A-E) are presented by flyway. We were unable to split the estimates for Colorado, Montana, New Mexico, and Wyoming into their Central and Pacific Flyway portions for this report, so we arbitrarily assigned all of Colorado, Montana, New Mexico, and Wyoming to the Central Flyway. However, the Waterfowl Parts Collection Survey enabled us to provide Flyway-specific point estimates of duck and goose harvest for those four states (Table 2).

Sea duck hunter activity and harvest were estimated separately from other ducks for states that had special sea duck seasons or regulations (Table 3). Likewise, brant hunter activity and harvest along the Atlantic and Pacific coasts were estimated separately and reported in Table 4. Sea duck and brant harvest estimates are also shown in the species-specific waterfowl estimates in Table 1, but the estimates of sea ducks and brant days afield and active hunters shown in Tables 3 and 4 are not included in the estimates of duck and goose days afield or active duck and goose hunters shown in Table 1.

Estimates for special September duck seasons are given in Table 5 and Table 6 shows estimates of Canada goose harvest during special resident goose seasons compared to regular season harvest. Table 7 summarizes the waterfowl harvest in Canada; those data were provided by the Canadian Wildlife Service, which conducts annual surveys similar to those conducted in the U.S.

Long-term trends of duck harvest and goose harvest since 1961 are shown in Figures 1 and 2. The curves are locally weighted regression (lowess) lines (Cleveland and Devlin 1988) that fit a pattern to the majority of the estimates and identify points that deviate from that pattern. These figures show one lowess line and point estimates for the Federal Duck Stamp-based survey's estimates from 1961-2001 and a separate lowess line and point estimates for the HIP survey estimates for 1999-present.

Waterfowl Age and Sex Ratios (Tables 8-12, Figures 3-6). The 2021-22 Waterfowl Parts Survey collected 75,019 duck wings and 14,017 goose tails and primary tips from 4,306 hunters; the 2022-23 sample consisted of 45,181 duck wings and 8,789 goose tails and primary wing tips from 2,750 hunters. State-specific mallard age ratios and flyway-level age ratios for other ducks species are reported in Tables 8 and 9, respectively, followed by state-specific mallard sex ratios (Table 10) and flyway-level sex ratios for other duck species (Table 11). Table 12 gives age ratios for geese. Figures 3-6 show the long-term trends in age ratios of mallards (Figure 3), northern pintails (Figure 4), American black ducks and wood ducks (Figure 5) and lesser scaup (Figure 6).

Dove and Band-tailed Pigeon Hunter Activity and Harvest (Tables 13-15). The dove and band-tailed pigeon estimates were based on samples of 43,835 hunters in 2021-22 (24% response rate) and 59,493 hunters in 2022-23 (21% response rate). Estimated numbers of active hunters, days afield, harvest and birds harvested per hunter are given in Table 13 for mourning doves, Table 14 for white-winged doves and Table 15 for band-tailed pigeons.

Woodcock Hunter Activity and Harvest (Table 16). Results of the HIP woodcock harvest survey are presented in Table 16. The 2021-22 survey had a sample size of 16,373 hunters and a 29% response rate; the 2022-23 survey sample size and response rate were 31,099 hunters and 26%.

Snipe, Coot, Gallinule, and Rail Hunter Activity and Harvest (Tables 17-21). The sample for the 2021-22 snipe, coot, gallinule, and rail harvest survey was 24,380 hunters (28% response rate) and 57,720 hunters (20% response rate) for the 2022-23 survey. Tables 17-20 give the estimates for Wilson's snipe (Table 17), American coot (Table 18), gallinules (Table 19; all species combined) and rails (Table 20; all species combined).

We believe that the number of rail wings collected each year is too small to provide reliable annual species composition estimates, even at the flyway and national levels. Therefore, we used 5-year running averages to obtain species-specific rail harvest estimates (Table 21). The 2021-22 estimates are based on the species composition of 1,356 rail wings collected from 107 hunters during the period 2017-2021, and the 2022-23 estimates are based on 1,201 rail wings collected from 97 hunters during the period 2018-2022.

Alaska Sandhill Crane Hunter Activity and Harvest Estimates. The estimates presented below were derived from surveys of 770 (2021-22, 53% response rate) and 766 (2022-23, 26% response rate) Alaska migratory bird hunters. For Alaska's 2021 season, we estimated that 1,137 active sandhill crane hunters spent 2,902 days hunting cranes and harvested 1,577 birds. In 2022, an estimated 877 active hunters spent 1,984 days hunting cranes and harvested 794 birds.

Mid-continent sandhill crane hunting activity and harvest in the Central Flyway states are estimated in a separate annual survey. Results of that survey for the 2021 and 2022 seasons were reported in "Status and harvests of sandhill cranes: Mid-continent, Rocky Mountain, Lower Colorado River Valley and Eastern populations" (Seamans 2023).

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affiliations of wingbee participants are in Appendix B. We also would like to thank Jack Bohannon and staff at the Flint Hills NWR for providing support for the processing of wings in the Central Flyway and Brett Galyean at the Coleman National Fish Hatchery for providing support for the Pacific Flyway wingbee.

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Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2021 and 2022 hunting seasons.

	Connecticut		Delaware		Florida	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	3,844	2,447	9,071	2,797	1,371	0
Domestic Mallard	0	21	92	52	748	0
Black Duck	1,463	987	6,414	2,175	0	0
Mallard x Black Hybrid	57	41	0	155	0	0
Mottled Duck	0	0	0	0	12,585	6,981
Gadwall	86	226	1,374	673	249	1,164
Wigeon	57	206	458	259	1,620	3,103
Green-winged Teal	545	493	10,079	3,263	9,470	4,913
Blue-winged/Cinnamon Teal	0	62	183	881	50,214	35,037
Northern Shoveler	0	0	2,749	2,020	1,371	3,232
Northern Pintail	57	0	825	466	1,495	1,293
Wood Duck	1,348	1,809	2,382	932	18,316	7,240
Redhead	0	0	92	0	4,610	517
Canvasback	0	0	92	0	0	129
Greater Scaup	143	82	183	0	374	259
Lesser Scaup	57	0	275	0	6,728	4,525
Ring-necked Duck	29	21	92	155	41,741	43,828
Goldeneyes	86	0	0	0	125	0
Bufflehead	1,033	308	641	52	997	2,715
Ruddy Duck	0	0	0	104	249	1,164
Long-tailed Duck	576	62	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	182	0	0	0	0	259
Hooded Merganser	172	21	641	259	2,492	0
Other Mergansers	172	308	0	0	374	388
Other Ducks	0	0	0	0	6,978	6,594
Total Duck Harvest	9,900±32%	7,100±32%	35,600±25%	14,200±31%	162,100±19%	123,300±25%
Total Active Duck Hunters[a]	1,700±28%	1,600±22%	3,500±17%	3,100±17%	15,600±21%	17,400±13%
Total Duck Hunter Days Afield[a]	9,700±31%	6,200±29%	22,800±18%	14,400±34%	83,900±18%	62,800±39%
Seasonal Duck Harvest Per Hunter[a]	5.2±42%	4.5±39%	10.1±31%	4.6±35%	10.4±28%	7.1±29%
Goose Species Composition						
Canada Goose	5,399	5,494	8,547	10,171	0	0
Cackling Goose	51	0	0	0	0	0
Snow Goose	0	14	1,321	2,337	0	0
Blue Goose	0	0	78	412	0	0
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	71	78	88	48	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	5,500±30%	5,600±45%	10,000±27%	13,000±67%	7,400±108%	NA[d]
Total Active Goose Hunters[b]	1,200±38%	1,300±24%	2,800±21%	2,700±20%	1,700±69%	NA[d]
Total Goose Hunter Days Afield[b]	6,800±37%	5,000±33%	13,500±22%	8,400±34%	2,300±81%	NA[d]
Seasonal Goose Harvest Per Hunter[b]	4.7±48%	4.2±51%	3.6±34%	4.7±70%	4.4±128%	2.2±99%
Active Waterfowl Hunters[c]	2,100±26%	2,100±19%	5,200±14%	4,400±13%	15,600±21%	17,400±13%
Sample Sizes						
Duck Wings	344	343	389	275	1,301	954
Goose Tails	325	396	129	125	0	0

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2021 and 2022 hunting seasons.

	Georgia		Maine		Maryland	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	6,766	6,393	7,634	8,520	28,654	23,553
Domestic Mallard	0	0	0	111	0	0
Black Duck	0	266	4,470	3,620	14,189	11,991
Mallard x Black Hybrid	0	0	100	278	964	1,071
Mottled Duck	376	0	0	0	0	0
Gadwall	3,007	2,664	352	0	3,168	3,640
Wigeon	376	0	151	56	2,617	1,285
Green-winged Teal	5,450	7,992	1,858	2,060	7,164	7,494
Blue-winged/Cinnamon Teal	2,067	3,197	251	334	413	214
Northern Shoveler	188	0	0	0	551	214
Northern Pintail	0	0	151	56	1,791	1,071
Wood Duck	102,240	68,461	5,023	4,455	16,807	9,207
Redhead	752	266	0	0	3,857	1,071
Canvasback	0	0	0	0	2,204	2,141
Greater Scaup	0	0	0	0	2,755	3,212
Lesser Scaup	564	799	151	0	2,480	1,713
Ring-necked Duck	12,592	2,664	452	167	1,791	856
Goldeneyes	0	0	804	278	551	0
Bufflehead	188	1,066	2,612	223	8,679	9,207
Ruddy Duck	564	0	50	334	827	642
Long-tailed Duck	0	0	2,387	2,852	8,318	2,521
Eiders	0	0	212	259	0	0
Scoters	0	0	1,061	1,093	13,863	5,882
Hooded Merganser	1,691	3,729	452	668	827	1,071
Other Mergansers	0	0	502	111	1,653	642
Other Ducks	0	0	0	56	0	0
Total Duck Harvest	136,800±14%	97,500±44%	28,700±21%	25,500±25%	124,100±14%	88,700±15%
Total Active Duck Hunters[a]	21,300±17%	19,300±16%	4,800±15%	4,500±13%	16,500±10%	18,700±6%
Total Duck Hunter Days Afield[a]	90,100±15%	71,000±39%	27,500±20%	15,800±21%	80,100±13%	59,800±13%
Seasonal Duck Harvest Per Hunter[a]	6.4±22%	5.0±46%	5.2±26%	4.7±29%	6.2±17%	4.3±16%
Goose Species Composition						
Canada Goose	21,113	3,524	10,133	8,198	52,443	43,737
Cackling Goose	0	0	0	0	109	0
Snow Goose	0	0	0	0	109	0
Blue Goose	0	0	0	0	0	0
Ross' Goose	0	0	0	0	0	181
White-fronted Goose	0	0	0	0	0	0
Brant	0	0	0	0	55	103
Other Geese	0	0	0	0	0	0
Total Goose Harvest	21,100±41%	3,500±87%	10,100±36%	8,200±31%	52,700±14%	44,000±15%
Total Active Goose Hunters[b]	7,300±29%	4,500±44%	3,200±20%	3,000±18%	15,900±9%	14,000±8%
Total Goose Hunter Days Afield[b]	27,700±35%	7,500±62%	15,700±31%	9,500±31%	78,800±12%	52,200±14%
Seasonal Goose Harvest Per Hunter[b]	2.9±51%	0.8±97%	3.1±41%	2.8±36%	3.3±16%	3.1±17%
Active Waterfowl Hunters[c]	22,200±17%	20,200±16%	5,800±14%	5,800±11%	25,900±7%	26,300±4%
Sample Sizes						
Duck Wings	728	366	567	400	780	395
Goose Tails	114	147	163	154	482	244

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2021 and 2022 hunting seasons.

	Massachusetts		New Hampshire		New Jersey	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	3,611	3,933	3,752	2,914	8,335	7,477
Domestic Mallard	0	66	0	0	136	0
Black Duck	2,619	1,442	1,470	607	13,959	5,521
Mallard x Black Hybrid	28	262	0	30	203	345
Mottled Duck	0	0	0	0	0	0
Gadwall	0	66	0	0	1,084	920
Wigeon	28	0	0	0	474	0
Green-winged Teal	1,296	524	254	212	7,251	3,106
Blue-winged/Cinnamon Teal	0	0	0	91	0	230
Northern Shoveler	0	0	0	0	2,033	805
Northern Pintail	0	0	0	61	1,152	115
Wood Duck	2,701	3,737	5,730	3,339	4,134	6,902
Redhead	0	0	0	0	0	0
Canvasback	0	0	0	0	0	0
Greater Scaup	110	66	0	0	1,355	1,265
Lesser Scaup	83	197	0	0	474	230
Ring-necked Duck	276	0	203	0	136	0
Goldeneyes	248	328	101	121	0	0
Bufflehead	1,957	2,294	456	152	11,791	9,777
Ruddy Duck	0	131	0	0	0	230
Long-tailed Duck	2,505	296	139	0	3,221	830
Eiders	3,897	1,186	0	0	0	0
Scoters	3,062	2,667	240	0	4,141	1,522
Hooded Merganser	331	590	963	364	1,559	920
Other Mergansers	276	1,573	659	243	678	575
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	23,000±46%	19,400±18%	14,000±48%	8,100±47%	62,100±23%	40,800±18%
Total Active Duck Hunters[a]	2,400±50%	3,900±7%	2,100±26%	2,000±21%	6,100±12%	6,200±8%
Total Duck Hunter Days Afield[a]	11,700±51%	14,100±13%	12,700±30%	7,500±39%	38,600±19%	24,200±13%
Seasonal Duck Harvest Per Hunter[a]	5.6±68%	3.9±19%	6.6±54%	4.2±51%	8.9±26%	6.2±19%
Goose Species Composition						
Canada Goose	4,740	9,099	3,801	3,487	10,638	11,152
Cackling Goose	0	0	0	0	113	0
Snow Goose	20	0	0	0	1,126	94
Blue Goose	0	0	0	0	0	0
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	545	224	0	0	2,153	1,627
Other Geese	0	0	0	0	0	0
Total Goose Harvest	5,300±66%	9,300±28%	3,800±42%	3,500±50%	14,000±47%	12,900±38%
Total Active Goose Hunters[b]	2,000±63%	2,700±9%	1,200±36%	1,500±26%	3,700±17%	3,600±11%
Total Goose Hunter Days Afield[b]	6,300±50%	9,300±16%	8,100±48%	5,200±43%	18,400±26%	11,000±19%
Seasonal Goose Harvest Per Hunter[b]	2.4±91%	3.4±29%	3.1±55%	2.4±57%	3.3±50%	3.2±40%
Active Waterfowl Hunters[c]	4,600±43%	4,900±6%	2,100±25%	2,600±17%	7,900±10%	7,800±6%
Sample Sizes						
Duck Wings	560	246	272	268	824	351
Goose Tails	234	63	62	89	242	135

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2021 and 2022 hunting seasons.

	New York		North Carolina		Pennsylvania	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	32,094	28,666	23,130	32,693	17,253	12,024
Domestic Mallard	76	85	0	0	58	0
Black Duck	15,405	8,736	4,667	1,614	2,798	2,122
Mallard x Black Hybrid	831	170	0	404	0	303
Mottled Duck	0	0	0	404	0	0
Gadwall	2,341	1,527	21,101	16,145	1,690	3,031
Wigeon	5,890	3,647	13,594	3,633	583	707
Green-winged Teal	10,648	7,718	33,680	43,994	1,515	2,930
Blue-winged/Cinnamon Teal	1,510	1,103	5,478	404	175	1,415
Northern Shoveler	982	509	5,884	3,633	117	101
Northern Pintail	2,265	2,290	7,913	2,018	117	202
Wood Duck	17,217	12,213	96,374	98,483	13,114	18,895
Redhead	302	2,120	2,435	1,211	58	606
Canvasback	0	933	0	0	0	202
Greater Scaup	1,435	1,611	812	3,229	58	202
Lesser Scaup	831	1,527	4,261	16,548	641	1,314
Ring-necked Duck	2,114	594	15,014	14,934	933	505
Goldeneyes	2,870	1,272	0	0	525	101
Bufflehead	5,739	3,392	5,681	12,109	3,031	2,223
Ruddy Duck	0	0	812	3,229	0	404
Long-tailed Duck	4,170	678	0	0	0	0
Eiders	159	0	0	0	0	0
Scoters	1,258	254	3,043	2,018	0	101
Hooded Merganser	2,643	3,053	10,753	7,265	1,341	505
Other Mergansers	4,153	6,955	406	1,211	1,807	1,213
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	114,900±22%	89,100±17%	255,000±18%	265,200±11%	45,800±27%	49,100±34%
Total Active Duck Hunters[a]	15,600±12%	14,000±7%	30,600±17%	30,800±5%	14,100±28%	14,500±15%
Total Duck Hunter Days Afield[a]	93,400±16%	58,700±12%	152,900±15%	136,800±9%	56,600±26%	47,700±25%
Seasonal Duck Harvest Per Hunter[a]	7.1±25%	6.4±19%	8.3±25%	8.6±12%	3.2±39%	3.4±37%
Goose Species Composition						
Canada Goose	67,961	75,234	33,417	28,898	39,485	42,439
Cackling Goose	283	0	0	0	0	0
Snow Goose	2,973	5,445	0	0	2,661	1,069
Blue Goose	0	0	0	0	0	0
Ross' Goose	0	0	0	0	62	0
White-fronted Goose	0	0	0	0	0	0
Brant	3,574	1,225	2,468	118	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	74,800±24%	81,900±22%	35,900±35%	29,000±30%	42,200±40%	43,500±37%
Total Active Goose Hunters[b]	12,000±12%	10,400±9%	13,000±26%	10,900±11%	12,700±28%	12,600±16%
Total Goose Hunter Days Afield[b]	53,100±19%	34,700±18%	43,300±31%	30,800±18%	43,900±25%	44,100±30%
Seasonal Goose Harvest Per Hunter[b]	5.9±27%	7.8±24%	2.6±44%	2.6±32%	3.3±48%	3.5±40%
Active Waterfowl Hunters[c]	19,500±10%	18,600±5%	33,200±17%	33,000±5%	22,500±23%	18,900±13%
Sample Sizes						
Duck Wings	1,492	1,050	1,257	657	786	486
Goose Tails	550	371	108	57	682	407

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2021 and 2022 hunting seasons.

	Rhode Island		South Carolina		Vermont	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	1,136	780	4,087	5,400	3,792	5,453
Domestic Mallard	0	14	195	0	0	0
Black Duck	1,373	596	487	0	1,351	947
Mallard x Black Hybrid	0	28	0	0	87	0
Mottled Duck	0	0	1,849	771	0	0
Gadwall	166	14	4,768	8,871	0	76
Wigeon	47	113	1,070	771	305	568
Green-winged Teal	402	71	9,536	33,171	1,264	1,704
Blue-winged/Cinnamon Teal	0	0	8,271	9,643	87	265
Northern Shoveler	0	0	2,335	3,471	0	0
Northern Pintail	24	28	778	1,543	44	227
Wood Duck	426	340	70,355	56,700	3,007	3,181
Redhead	0	0	97	0	0	0
Canvasback	0	0	0	0	0	0
Greater Scaup	95	28	0	0	44	38
Lesser Scaup	0	0	681	1,157	567	76
Ring-necked Duck	71	14	9,050	22,757	174	265
Goldeneyes	142	57	0	0	1,220	833
Bufflehead	473	425	2,433	0	131	379
Ruddy Duck	0	14	97	771	0	0
Long-tailed Duck	0	0	0	0	44	0
Eiders	2,256	71	0	0	0	0
Scoters	0	390	0	771	0	76
Hooded Merganser	118	71	3,698	4,243	479	303
Other Mergansers	260	99	0	0	87	114
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	7,000±29%	3,200±45%	119,800±34%	150,000±33%	12,700±23%	14,500±75%
Total Active Duck Hunters[a]	900±17%	700±23%	16,000±28%	20,400±14%	2,000±19%	1,900±31%
Total Duck Hunter Days Afield[a]	4,900±24%	2,500±45%	73,700±33%	91,000±29%	13,000±26%	10,700±59%
Seasonal Duck Harvest Per Hunter[a]	5.1±34%	3.7±51%	7.5±44%	7.4±36%	6.4±30%	7.8±81%
Goose Species Composition						
Canada Goose	1,981	1,383	7,979	3,466	6,182	15,683
Cackling Goose	0	0	0	0	0	0
Snow Goose	242	0	0	0	0	107
Blue Goose	0	0	0	0	0	0
Ross' Goose	24	0	0	0	0	0
White-fronted Goose	0	0	0	0	0	0
Brant	416	56	0	0	0	215
Other Geese	0	0	0	0	0	0
Total Goose Harvest	2,700±36%	1,400±43%	8,000±56%	3,500±61%	6,200±29%	16,000±72%
Total Active Goose Hunters[b]	700±20%	400±30%	3,000±50%	3,900±38%	1,600±26%	1,400±45%
Total Goose Hunter Days Afield[b]	2,900±27%	1,800±50%	8,200±58%	6,300±60%	9,700±35%	8,200±83%
Seasonal Goose Harvest Per Hunter[b]	3.0±42%	3.2±52%	2.6±75%	.9±71%	3.8±39%	11.8±85%
Active Waterfowl Hunters[c]	1,200±14%	1,000±18%	16,600±28%	20,500±14%	2,900±19%	2,200±30%
Sample Sizes						
Duck Wings	201	203	1,231	389	291	383
Goose Tails	127	103	18	11	68	149

Table 1A. Preliminary estimates of waterfowl harvest and hunter activity in the Atlantic Flyway during the 2021 and 2022 hunting seasons.

	Virginia		West Virginia		Flyway Total	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	23,221	24,248	2,129	2,238	179,879	169,537
Domestic Mallard	0	0	0	0	1,303	348
Black Duck	5,661	8,729	272	197	76,598	49,551
Mallard x Black Hybrid	288	776	34	0	2,593	3,864
Mottled Duck	0	0	0	0	14,809	8,157
Gadwall	7,101	4,074	51	263	46,539	43,354
Wigeon	1,535	0	34	0	28,840	14,348
Green-winged Teal	7,292	3,880	51	132	107,755	123,658
Blue-winged/Cinnamon Teal	384	388	34	230	69,069	53,492
Northern Shoveler	3,454	2,910	51	0	19,714	16,895
Northern Pintail	672	194	17	0	17,300	9,564
Wood Duck	20,150	13,385	1,516	2,271	380,841	311,549
Redhead	1,535	194	51	33	13,790	6,018
Canvasback	480	194	0	0	2,776	3,599
Greater Scaup	1,151	0	17	33	8,533	10,025
Lesser Scaup	3,454	2,328	0	0	21,247	30,413
Ring-necked Duck	6,237	7,372	119	33	91,023	94,165
Goldeneyes	96	0	0	33	6,767	3,024
Bufflehead	11,802	16,101	153	33	57,797	60,456
Ruddy Duck	192	194	0	99	2,791	7,316
Long-tailed Duck	617	278	0	0	21,975	7,517
Eiders	0	0	0	0	6,524	1,516
Scoters	12,026	1,947	0	0	38,877	16,980
Hooded Merganser	2,687	1,746	68	33	30,916	24,841
Other Mergansers	864	0	0	33	11,891	13,465
Other Ducks	0	0	0	0	6,978	6,649
Total Duck Harvest	110,900±22%	88,900±14%	4,600±28%	5,700±56%	1,267,100±7%	1,090,300±8%
Total Active Duck Hunters[a]	14,600±21%	15,200±7%	1,200±25%	1,400±39%	169,000	175,500
Total Duck Hunter Days Afield[a]	82,300±21%	53,500±12%	5,700±29%	5,300±48%	859,400±6%	682,100±8%
Seasonal Duck Harvest Per Hunter[a]	6.7±30%	5.7±16%	3.9±38%	4.1±68%		
Goose Species Composition						
Canada Goose	20,770	23,583	5,862	3,112	300,450	288,660
Cackling Goose	81	0	0	0	637	0
Snow Goose	0	0	0	0	8,453	9,065
Blue Goose	0	0	0	17	78	429
Ross' Goose	0	0	0	0	86	181
White-fronted Goose	0	0	0	17	0	17
Brant	100	199	0	0	9,468	3,894
Other Geese	0	0	0	0	0	0
Total Goose Harvest	21,000±40%	23,800±25%	5,900±63%	3,100±78%	319,200±10%	302,200±40%
Total Active Goose Hunters[b]	8,300±26%	7,300±12%	900±28%	1,300±44%	91,200	170,400
Total Goose Hunter Days Afield[b]	34,600±26%	20,700±17%	5,500±35%	4,000±65%	378,900±7%	544,000±71%
Seasonal Goose Harvest Per Hunter[b]	2.5±47%	3.2±27%	6.3±69%	2.4±89%		
Active Waterfowl Hunters[c]	19,800±19%	17,000±7%	1,400±23%	1,700±36%	208,500	204,400
Sample Sizes						
Duck Wings	1,065	455	270	172	12,358	7,393
Goose Tails	257	101	185	186	3,746	2,738

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2021 and 2022 hunting seasons.

	Alabama		Arkansas		Illinois	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	8,557	12,792	389,125	310,881	81,923	74,380
Domestic Mallard	1,222	0	0	0	263	0
Black Duck	0	0	1,564	0	263	260
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	12,225	20,157	155,077	126,478	24,327	19,765
Wigeon	1,467	775	12,250	12,754	5,917	6,502
Green-winged Teal	5,134	6,977	133,183	136,044	24,064	27,307
Blue-winged/Cinnamon Teal	8,068	3,489	10,165	10,628	13,939	19,245
Northern Shoveler	733	2,326	41,180	45,171	6,575	3,901
Northern Pintail	244	775	27,627	14,880	6,838	7,022
Wood Duck	72,614	32,949	111,290	38,262	9,994	20,025
Redhead	733	388	261	2,657	920	3,381
Canvasback	733	775	1,303	2,657	1,578	1,300
Greater Scaup	489	0	0	0	0	0
Lesser Scaup	1,711	1,163	3,388	1,063	4,076	3,901
Ring-necked Duck	10,758	5,039	18,766	14,348	12,887	7,022
Goldeneyes	489	0	1,303	0	1,315	1,300
Bufflehead	1,956	0	5,734	2,657	2,893	3,901
Ruddy Duck	244	0	0	531	0	1,040
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	775	0	0	0	0
Hooded Merganser	3,423	1,938	3,388	2,657	4,339	3,381
Other Mergansers	244	0	0	0	263	0
Other Ducks	244	388	261	0	0	0
Total Duck Harvest	131,300±29%	90,700±40%	915,900±9%	721,700±16%	202,400±18%	203,600±34%
Total Active Duck Hunters[a]	14,400±22%	10,100±23%	56,500±6%	57,400±6%	18,400±14%	16,100±12%
Total Duck Hunter Days Afield[a]	74,900±22%	46,800±40%	400,200±9%	273,100±16%	160,700±19%	100,200±28%
Seasonal Duck Harvest Per Hunter[a]	9.1±37%	9.0±46%	16.2±11%	12.6±17%	11.0±23%	12.7±36%
Goose Species Composition						
Canada Goose	15,418	4,802	11,070	37,609	66,799	51,490
Cackling Goose	0	0	0	0	678	210
Snow Goose	0	0	34,316	5,373	170	841
Blue Goose	0	0	16,604	1,791	170	630
Ross' Goose	0	0	7,749	5,373	509	210
White-fronted Goose	0	0	82,468	57,308	3,560	3,993
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	15,400±49%	4,800±77%	152,200±19%	107,500±27%	71,900±26%	57,400±36%
Total Active Goose Hunters[b]	5,400±42%	2,600±48%	23,900±11%	22,100±14%	15,300±17%	12,600±15%
Total Goose Hunter Days Afield[b]	13,600±41%	7,200±69%	125,000±16%	48,500±20%	107,900±22%	63,100±36%
Seasonal Goose Harvest Per Hunter[b]	2.8±65%	1.8±90%	6.4±22%	4.9±31%	4.7±31%	4.6±39%
Active Waterfowl Hunters[c]	14,400±22%	10,200±23%	59,200±6%	60,500±6%	23,200±14%	19,500±11%
Sample Sizes						
Duck Wings	537	234	3,514	1,358	1,539	783
Goose Tails	60	5	275	60	424	273

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2021 and 2022 hunting seasons.

	Indiana		Iowa		Kentucky	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	36,013	35,947	22,456	19,864	54,442	38,287
Domestic Mallard	0	265	112	0	0	0
Black Duck	493	929	0	0	1,496	614
Mallard x Black Hybrid	0	0	0	0	115	0
Mottled Duck	0	0	0	0	0	0
Gadwall	8,263	5,173	8,196	6,621	10,704	8,394
Wigeon	987	663	2,807	1,796	1,611	2,662
Green-winged Teal	11,347	6,102	24,028	20,538	6,791	6,756
Blue-winged/Cinnamon Teal	4,193	2,786	23,578	20,874	921	409
Northern Shoveler	3,700	663	2,470	2,469	3,223	614
Northern Pintail	2,713	663	3,930	2,581	4,029	2,866
Wood Duck	5,797	7,163	9,656	11,559	20,948	5,733
Redhead	740	1,592	112	1,122	1,036	205
Canvasback	123	663	561	1,010	806	409
Greater Scaup	123	398	112	0	345	0
Lesser Scaup	0	663	1,235	561	1,381	614
Ring-necked Duck	1,480	1,592	1,909	1,571	6,791	3,276
Goldeneyes	493	398	112	112	691	0
Bufflehead	370	1,194	225	1,122	345	614
Ruddy Duck	0	133	0	112	0	0
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	133	0	112	0	0
Hooded Merganser	123	796	112	337	4,949	0
Other Mergansers	0	929	112	112	0	0
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	77,000±17%	68,800±39%	101,700±36%	92,500±24%	120,600±18%	71,500±55%
Total Active Duck Hunters[a]	10,000±16%	10,000±15%	10,200±24%	9,900±10%	8,700±20%	7,400±18%
Total Duck Hunter Days Afield[a]	62,300±27%	33,000±26%	79,600±35%	50,000±24%	88,200±30%	42,700±41%
Seasonal Duck Harvest Per Hunter[a]	7.7±23%	6.9±42%	9.9±43%	9.3±26%	13.9±27%	9.7±58%
Goose Species Composition						
Canada Goose	44,094	32,692	24,221	27,790	27,168	10,615
Cackling Goose	0	0	0	524	0	0
Snow Goose	0	617	0	175	2,508	0
Blue Goose	0	154	0	0	0	0
Ross' Goose	0	0	0	0	0	0
White-fronted Goose	3,614	1,388	112	350	3,762	0
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	47,700±24%	34,900±51%	24,300±34%	28,800±32%	33,400±40%	10,600±70%
Total Active Goose Hunters[b]	8,800±18%	8,300±19%	7,200±27%	8,300±13%	8,100±15%	4,000±28%
Total Goose Hunter Days Afield[b]	58,300±28%	31,200±36%	46,700±35%	33,400±27%	65,400±26%	18,500±93%
Seasonal Goose Harvest Per Hunter[b]	5.4±30%	4.2±54%	3.4±44%	3.5±34%	4.1±43%	2.7±76%
Active Waterfowl Hunters[c]	11,400±15%	12,300±12%	12,900±22%	11,500±9%	9,200±20%	8,300±16%
Sample Sizes						
Duck Wings	624	519	906	824	1,048	349
Goose Tails	132	226	217	165	80	8

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2021 and 2022 hunting seasons.

	Louisiana		Michigan		Minnesota	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	16,773	23,434	85,511	84,139	84,070	63,072
Domestic Mallard	0	0	348	209	0	0
Black Duck	125	0	4,693	5,860	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	7,635	5,394	0	209	0	0
Gadwall	78,731	64,723	4,171	6,279	14,253	7,635
Wigeon	8,762	6,324	5,735	3,767	13,287	11,951
Green-winged Teal	124,167	142,837	13,904	15,698	71,750	46,142
Blue-winged/Cinnamon Teal	216,167	163,854	8,690	9,000	81,171	125,813
Northern Shoveler	30,666	19,343	3,128	1,674	2,657	6,639
Northern Pintail	22,280	12,461	6,083	3,349	18,843	6,971
Wood Duck	46,187	51,518	48,839	24,279	83,587	62,076
Redhead	2,003	1,674	4,866	7,744	2,416	10,291
Canvasback	4,131	10,229	1,043	2,302	2,899	3,652
Greater Scaup	876	372	1,912	1,884	1,691	664
Lesser Scaup	17,899	12,461	9,559	2,302	4,590	5,311
Ring-necked Duck	24,658	17,297	8,516	5,442	28,507	71,703
Goldeneyes	250	372	6,257	2,302	3,141	7,967
Bufflehead	3,880	3,348	13,209	13,186	7,731	5,975
Ruddy Duck	125	558	869	209	0	0
Long-tailed Duck	0	0	3,824	7,116	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	695	1,674	0	0
Hooded Merganser	2,879	3,162	5,388	3,977	7,489	2,656
Other Mergansers	250	0	1,564	628	725	0
Other Ducks	5,507	4,836	0	0	0	0
Total Duck Harvest	614,000±12%	544,200±19%	238,800±16%	203,200±20%	428,800±19%	438,500±17%
Total Active Duck Hunters[a]	37,300±7%	35,700±8%	30,700±14%	27,400±10%	54,800±16%	53,700±6%
Total Duck Hunter Days Afield[a]	262,500±10%	153,100±17%	174,600±14%	120,900±17%	297,900±16%	214,600±13%
Seasonal Duck Harvest Per Hunter[a]	16.5±14%	15.2±21%	7.8±21%	7.4±22%	7.8±25%	8.2±18%
Goose Species Composition						
Canada Goose	0	0	148,984	87,457	144,151	119,747
Cackling Goose	0	0	2,205	913	335	2,348
Snow Goose	11,474	13,319	315	0	0	0
Blue Goose	6,120	3,330	315	0	0	0
Ross' Goose	1,912	0	315	0	0	0
White-fronted Goose	23,714	17,759	0	0	0	783
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	43,200±41%	34,400±69%	152,100±18%	88,400±27%	144,500±27%	122,900±26%
Total Active Goose Hunters[b]	7,100±16%	6,500±28%	27,900±15%	22,200±12%	41,700±17%	34,600±10%
Total Goose Hunter Days Afield[b]	39,900±29%	17,800±47%	171,800±19%	78,000±22%	250,200±22%	124,900±20%
Seasonal Goose Harvest Per Hunter[b]	6.0±44%	5.3±74%	5.5±23%	4.0±30%	3.5±32%	3.6±28%
Active Waterfowl Hunters[c]	37,900±7%	36,100±8%	39,500±13%	34,500±8%	61,500±16%	58,400±6%
Sample Sizes						
Duck Wings	4,905	2,926	1,374	971	1,775	1,321
Goose Tails	113	31	483	387	431	157

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2021 and 2022 hunting seasons.

	Mississippi		Missouri		Ohio	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	43,092	29,970	177,561	106,035	38,424	22,857
Domestic Mallard	0	263	194	0	225	0
Black Duck	0	0	0	0	4,269	2,540
Mallard x Black Hybrid	201	0	0	0	225	115
Mottled Duck	403	263	0	0	0	0
Gadwall	19,331	19,191	38,313	31,877	6,966	2,424
Wigeon	2,416	1,052	12,447	5,313	5,393	1,270
Green-winged Teal	27,587	14,722	57,566	44,274	7,190	2,540
Blue-winged/Cinnamon Teal	3,222	1,840	19,448	17,488	9,887	4,733
Northern Shoveler	12,082	8,938	19,448	11,068	2,921	462
Northern Pintail	7,450	1,052	14,392	7,526	4,269	2,655
Wood Duck	38,662	16,562	10,502	6,420	10,786	9,697
Redhead	403	263	1,556	2,656	225	1,039
Canvasback	0	263	972	885	0	231
Greater Scaup	0	526	0	1,107	3,820	1,039
Lesser Scaup	403	526	972	5,977	2,921	1,732
Ring-necked Duck	7,249	2,892	8,168	3,542	2,247	693
Goldeneyes	0	0	972	2,214	1,348	346
Bufflehead	1,007	526	1,167	2,656	4,719	1,732
Ruddy Duck	0	0	0	0	225	231
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	526	0	0	0	231
Hooded Merganser	805	3,680	1,556	664	674	577
Other Mergansers	0	0	194	443	674	231
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	164,300±20%	103,100±39%	365,400±32%	250,100±29%	107,400±41%	57,400±28%
Total Active Duck Hunters[a]	10,600±22%	10,400±18%	26,000±15%	25,600±10%	14,300±30%	13,000±13%
Total Duck Hunter Days Afield[a]	75,300±18%	39,000±30%	181,300±22%	108,000±26%	139,000±70%	46,600±27%
Seasonal Duck Harvest Per Hunter[a]	15.6±29%	9.9±43%	14.0±35%	9.8±31%	7.5±50%	4.4±31%
Goose Species Composition						
Canada Goose	10,993	1,146	47,272	31,295	87,010	50,261
Cackling Goose	0	0	0	608	0	0
Snow Goose	3,664	353	6,145	2,431	0	0
Blue Goose	4,886	441	2,836	2,431	0	0
Ross' Goose	0	264	1,891	1,823	0	0
White-fronted Goose	12,214	793	3,309	1,519	0	0
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	31,800±90%	3,000±59%	61,500±31%	40,100±41%	87,000±43%	50,300±26%
Total Active Goose Hunters[b]	5,000±41%	2,200±45%	13,400±19%	12,600±19%	13,800±27%	12,300±14%
Total Goose Hunter Days Afield[b]	31,100±62%	5,600±74%	73,700±28%	34,400±34%	82,000±30%	46,000±29%
Seasonal Goose Harvest Per Hunter[b]	6.3±99%	1.4±75%	4.6±36%	3.2±45%	6.3±51%	4.1±29%
Active Waterfowl Hunters[c]	10,600±22%	10,400±18%	28,900±14%	28,100±10%	17,500±27%	17,100±10%
Sample Sizes						
Duck Wings	816	392	1,879	1,130	478	497
Goose Tails	26	34	130	132	155	133

Table 1B. Preliminary estimates of waterfowl harvest and hunter activity in the Mississippi Flyway during the 2021 and 2022 hunting seasons.

	Tennessee		Wisconsin		Flyway Total	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	65,992	66,346	80,278	93,544	1,184,216	981,547
Domestic Mallard	0	0	8,591	3,164	10,955	3,902
Black Duck	273	990	889	396	14,065	11,589
Mallard x Black Hybrid	0	0	296	198	837	313
Mottled Duck	0	0	0	0	8,038	5,866
Gadwall	23,452	39,609	10,516	13,646	414,525	371,974
Wigeon	4,909	5,941	4,295	3,955	82,283	64,724
Green-winged Teal	20,179	33,668	36,436	51,815	563,327	555,419
Blue-winged/Cinnamon Teal	818	1,980	24,587	37,774	424,854	419,913
Northern Shoveler	3,272	4,951	3,703	2,769	135,760	110,989
Northern Pintail	5,181	4,951	8,887	7,515	132,767	75,268
Wood Duck	60,266	30,697	86,499	67,241	615,625	384,182
Redhead	1,909	0	4,443	7,911	21,623	40,922
Canvasback	545	0	4,740	2,967	19,435	27,344
Greater Scaup	0	0	2,370	5,142	11,739	11,131
Lesser Scaup	273	3,961	6,369	9,295	54,779	49,530
Ring-necked Duck	3,272	12,873	11,109	13,053	146,316	160,342
Goldeneyes	545	0	4,295	5,537	21,212	20,549
Bufflehead	0	4,951	10,072	11,866	53,307	53,728
Ruddy Duck	273	0	444	1,187	2,180	4,001
Long-tailed Duck	0	0	3,703	1,582	7,527	8,698
Eiders	0	0	0	0	0	0
Scoters	0	0	1,777	396	2,473	3,847
Hooded Merganser	818	1,980	2,962	2,373	38,907	28,178
Other Mergansers	0	0	1,481	989	5,509	3,331
Other Ducks	0	0	0	0	6,013	5,223
Total Duck Harvest	192,000±22%	212,900±52%	318,700±14%	344,300±15%	3,978,300±5%	3,402,500±7%
Total Active Duck Hunters[a]	18,500±25%	20,300±14%	47,500±20%	41,000±7%	357,700	337,900
Total Duck Hunter Days Afield[a]	99,600±19%	98,000±39%	296,900±15%	207,700±13%	2,393,000±6%	1,533,800±6%
Seasonal Duck Harvest Per Hunter[a]	10.4±34%	10.5±53%	6.7±24%	8.4±17%		
Goose Species Composition						
Canada Goose	12,445	13,852	134,268	101,946	773,893	570,700
Cackling Goose	889	0	2,290	2,109	6,397	6,713
Snow Goose	0	0	0	0	58,592	23,107
Blue Goose	0	0	0	0	30,930	8,777
Ross' Goose	0	0	0	0	12,376	7,670
White-fronted Goose	889	2,770	0	0	133,643	86,663
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	14,200±48%	16,600±85%	136,600±28%	104,100±32%	1,015,800±9%	703,600±11%
Total Active Goose Hunters[b]	6,500±36%	7,300±29%	42,300±14%	27,700±10%	226,500	183,400
Total Goose Hunter Days Afield[b]	49,000±49%	30,900±75%	281,300±19%	134,800±23%	1,395,900±7%	674,200±9%
Seasonal Goose Harvest Per Hunter[b]	2.2±60%	2.3±90%	3.2±31%	3.8±34%		
Active Waterfowl Hunters[c]	18,700±25%	21,600±13%	57,700±19%	46,300±6%	402,600	374,700
Sample Sizes						
Duck Wings	704	215	2,152	1,741	22,251	13,260
Goose Tails	16	18	477	296	3,019	1,925

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2021 and 2022 hunting seasons.

	Colorado		Kansas		Nebraska	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	33,000	22,263	121,261	55,986	53,240	31,221
Domestic Mallard	0	0	0	0	0	0
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	5,811	3,331	20,151	11,232	9,382	6,646
Wigeon	4,605	4,306	8,838	6,845	8,365	4,810
Green-winged Teal	6,468	5,931	32,525	21,236	24,303	21,251
Blue-winged/Cinnamon Teal	5,482	3,494	27,575	11,583	21,816	22,388
Northern Shoveler	1,316	1,056	4,773	2,282	2,035	1,399
Northern Pintail	1,535	1,056	7,954	1,580	2,261	1,137
Wood Duck	767	244	5,126	3,686	1,582	1,749
Redhead	439	488	884	2,457	0	875
Canvasback	329	163	354	527	226	262
Greater Scaup	0	0	177	176	0	0
Lesser Scaup	329	1,056	1,591	878	113	437
Ring-necked Duck	877	569	6,187	4,037	678	875
Goldeneyes	767	2,925	16,969	13,163	791	0
Bufflehead	548	163	4,419	1,580	1,130	0
Ruddy Duck	0	163	0	351	0	437
Long-tailed Duck	0	0	0	351	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	0	0	0	0
Hooded Merganser	110	325	1,061	351	452	0
Other Mergansers	110	325	354	0	0	0
Other Ducks	110	81	0	0	0	87
Total Duck Harvest	62,600±31%	47,900±26%	260,200±28%	138,300±23%	126,400±16%	93,600±39%
Total Active Duck Hunters[a]	8,100±18%	8,200±15%	20,900±15%	20,800±11%	13,500±16%	11,100±13%
Total Duck Hunter Days Afield[a]	32,900±21%	29,500±28%	105,600±19%	60,500±21%	91,100±13%	43,500±32%
Seasonal Duck Harvest Per Hunter[a]	7.7±36%	5.8±30%	12.5±32%	6.6±26%	9.4±22%	8.4±41%
Goose Species Composition						
Canada Goose	47,819	40,100	90,108	60,897	91,232	69,815
Cackling Goose	30,043	13,824	13,054	11,711	9,754	5,489
Snow Goose	2,311	2,513	11,462	5,153	6,312	878
Blue Goose	178	457	4,776	468	287	439
Ross' Goose	533	571	5,731	2,342	287	439
White-fronted Goose	178	0	6,050	937	287	659
Brant	178	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	81,200±22%	57,500±46%	131,200±33%	81,500±30%	108,200±16%	77,700±54%
Total Active Goose Hunters[b]	10,300±18%	7,500±17%	17,400±17%	13,400±15%	13,300±12%	9,900±16%
Total Goose Hunter Days Afield[b]	43,500±23%	29,600±33%	90,300±42%	40,600±31%	111,200±17%	50,500±51%
Seasonal Goose Harvest Per Hunter[b]	7.9±28%	7.7±49%	7.5±37%	6.1±33%	8.1±21%	7.8±57%
Active Waterfowl Hunters[c]	13,800±15%	10,900±13%	25,600±14%	23,200±10%	17,400±13%	13,500±11%
Sample Sizes						
Duck Wings	571	590	1,472	788	1,118	1,070
Goose Tails	457	503	412	174	377	354

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2021 and 2022 hunting seasons.

	New Mexico		North Dakota		Oklahoma	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	7,125	2,783	86,387	70,870	114,046	62,338
Domestic Mallard	22	33	0	0	0	0
Black Duck	0	0	0	252	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	1,536	1,000	42,436	59,016	59,110	23,057
Wigeon	2,293	1,718	22,034	12,863	25,050	6,405
Green-winged Teal	2,004	2,098	47,682	44,388	49,222	18,360
Blue-winged/Cinnamon Teal	779	457	32,760	61,286	10,108	4,697
Northern Shoveler	712	609	11,775	23,707	7,032	0
Northern Pintail	401	402	16,438	16,141	8,570	2,562
Wood Duck	178	217	3,614	757	8,790	5,551
Redhead	245	152	5,013	19,672	1,538	854
Canvasback	156	130	3,731	9,836	3,296	854
Greater Scaup	0	0	0	252	0	0
Lesser Scaup	22	54	4,080	5,549	1,978	0
Ring-necked Duck	757	870	6,878	6,053	15,821	11,101
Goldeneyes	401	902	350	504	439	427
Bufflehead	557	272	4,780	4,792	1,318	854
Ruddy Duck	134	87	350	504	0	0
Long-tailed Duck	0	0	0	0	439	0
Eiders	0	0	0	0	0	0
Scoters	0	0	117	0	0	0
Hooded Merganser	67	54	466	504	1,978	1,281
Other Mergansers	289	174	117	0	0	0
Other Ducks	312	163	0	0	220	0
Total Duck Harvest	18,000±80%	12,200±59%	289,000±12%	336,900±12%	309,000±15%	138,300±30%
Total Active Duck Hunters[a]	5,400±74%	2,100±39%	29,900±12%	27,000±8%	23,400±11%	18,000±15%
Total Duck Hunter Days Afield[a]	24,100±101%	7,100±52%	142,300±14%	92,600±11%	129,100±16%	61,900±34%
Seasonal Duck Harvest Per Hunter[a]	3.4±110%	5.8±70%	9.7±17%	12.5±14%	13.2±19%	7.7±33%
Goose Species Composition						
Canada Goose	3,221	3,620	96,192	64,992	34,927	48,011
Cackling Goose	872	883	3,337	2,981	31,923	25,418
Snow Goose	67	221	32,195	11,925	3,004	2,824
Blue Goose	0	0	18,060	11,329	0	0
Ross' Goose	134	132	7,852	5,366	2,629	2,824
White-fronted Goose	0	0	5,104	4,174	2,629	2,824
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	4,300±64%	4,900±105%	162,700±21%	100,800±34%	75,100±30%	81,900±71%
Total Active Goose Hunters[b]	3,600±76%	900±51%	26,900±11%	18,800±11%	11,500±18%	7,600±31%
Total Goose Hunter Days Afield[b]	14,600±105%	6,200±81%	112,000±14%	47,800±19%	49,000±28%	26,800±60%
Seasonal Goose Harvest Per Hunter[b]	1.2±99%	5.3±117%	6.1±24%	5.4±35%	6.5±35%	10.8±78%
Active Waterfowl Hunters[c]	8,700±57%	2,400±36%	34,400±11%	29,600±7%	23,800±11%	18,600±15%
Sample Sizes						
Duck Wings	808	1,120	2,479	1,336	1,406	324
Goose Tails	64	110	829	169	200	58

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2021 and 2022 hunting seasons.

	South Dakota		Texas		Wyoming	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	40,388	32,081	36,731	69,287	14,587	6,166
Domestic Mallard	0	0	0	0	0	0
Black Duck	0	133	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	3,845	1,626	0	0
Gadwall	25,077	17,366	87,783	177,609	785	2,467
Wigeon	11,587	7,556	34,344	81,648	3,352	2,941
Green-winged Teal	24,415	23,464	135,520	211,113	1,812	2,467
Blue-winged/Cinnamon Teal	16,883	17,631	206,993	223,149	1,117	1,897
Northern Shoveler	4,966	5,965	39,648	56,601	211	759
Northern Pintail	5,711	5,568	33,283	41,637	393	474
Wood Duck	3,973	1,988	28,510	35,782	272	95
Redhead	2,897	4,772	14,189	51,721	30	95
Canvasback	662	928	2,122	11,710	60	95
Greater Scaup	0	0	663	2,602	0	0
Lesser Scaup	1,986	1,193	14,719	16,915	60	95
Ring-necked Duck	3,559	4,905	44,422	67,010	211	854
Goldeneyes	248	0	2,122	0	91	379
Bufflehead	4,221	3,712	5,437	8,458	30	0
Ruddy Duck	248	0	1,061	1,301	0	474
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	0	0	60	0
Hooded Merganser	414	795	398	2,602	0	95
Other Mergansers	0	398	398	1,626	30	0
Other Ducks	0	0	1,989	1,952	0	0
Total Duck Harvest	147,200±31%	128,500±30%	694,200±14%	1,064,400±21%	23,100±20%	19,400±44%
Total Active Duck Hunters[a]	14,200±21%	9,600±14%	64,600±23%	73,200±7%	3,700±20%	3,300±24%
Total Duck Hunter Days Afield[a]	64,100±27%	39,000±24%	295,500±17%	323,500±17%	19,400±50%	8,900±37%
Seasonal Duck Harvest Per Hunter[a]	10.3±37%	13.3±33%	10.7±27%	14.5±22%	6.2±28%	5.8±50%
Goose Species Composition						
Canada Goose	73,761	42,258	25,222	17,448	26,566	21,553
Cackling Goose	1,216	745	19,739	23,652	1,464	1,461
Snow Goose	10,335	2,420	25,222	15,897	139	365
Blue Goose	4,255	1,862	9,869	3,490	0	0
Ross' Goose	1,824	186	12,063	8,530	0	91
White-fronted Goose	4,863	1,303	10,966	5,428	0	0
Brant	0	0	0	0	0	0
Other Geese	0	0	0	388	0	0
Total Goose Harvest	96,300±30%	48,800±63%	103,100±33%	74,800±40%	28,200±20%	23,500±37%
Total Active Goose Hunters[b]	13,800±17%	6,300±21%	35,500±24%	17,400±17%	3,900±15%	3,900±22%
Total Goose Hunter Days Afield[b]	67,400±29%	18,700±32%	107,100±47%	45,900±32%	17,500±19%	9,000±33%
Seasonal Goose Harvest Per Hunter[b]	7.0±35%	7.7±66%	2.9±41%	4.3±43%	7.3±25%	6.0±43%
Active Waterfowl Hunters[c]	17,400±18%	10,900±13%	71,700±23%	79,000±7%	6,000±12%	5,200±16%
Sample Sizes						
Duck Wings	1,779	969	5,235	3,272	765	204
Goose Tails	475	262	94	193	404	257

Table 1C. Preliminary estimates of waterfowl harvest and hunter activity in the Central Flyway during the 2021 and 2022 hunting seasons.

	Flyway Total	
Duck Species Composition	2021	2022
Mallard	506,763	352,996
Domestic Mallard	22	33
Black Duck	0	385
Mallard x Black Hybrid	0	0
Mottled Duck	3,845	1,626
Gadwall	252,071	301,724
Wigeon	120,468	129,091
Green-winged Teal	323,950	350,309
Blue-winged/Cinnamon Teal	323,514	346,583
Northern Shoveler	72,467	92,378
Northern Pintail	76,545	70,557
Wood Duck	52,812	50,068
Redhead	25,234	81,086
Canvasback	10,935	24,505
Greater Scaup	840	3,030
Lesser Scaup	24,879	26,177
Ring-necked Duck	79,391	96,273
Goldeneyes	22,179	18,301
Bufflehead	22,440	19,829
Ruddy Duck	1,792	3,318
Long-tailed Duck	439	351
Eiders	0	0
Scoters	177	0
Hooded Merganser	4,945	6,008
Other Mergansers	1,297	2,523
Other Ducks	2,630	2,284
Total Duck Harvest	1,929,600±8%	1,979,400±12%
Total Active Duck Hunters[a]	183,800	173,400
Total Duck Hunter Days Afield[a]	904,100±8%	666,300±10%
Seasonal Duck Harvest Per Hunter[a]		
Goose Species Composition		
Canada Goose	489,047	368,693
Cackling Goose	111,403	86,163
Snow Goose	91,047	42,197
Blue Goose	37,426	18,045
Ross' Goose	31,053	20,483
White-fronted Goose	30,077	15,325
Brant	178	0
Other Geese	0	388
Total Goose Harvest	790,200±10%	551,300±18%
Total Active Goose Hunters[b]	136,100	85,700
Total Goose Hunter Days Afield[b]	612,500±12%	275,100±14%
Seasonal Goose Harvest Per Hunter[b]		
Active Waterfowl Hunters[c]	218,800	193,400
Sample Sizes		
Duck Wings	15,633	9,673
Goose Tails	3,312	2,080

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2021 and 2022 hunting seasons.

	Arizona		California		Idaho	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	2,292	3,794	87,509	96,180	150,403	140,683
Domestic Mallard	0	0	0	370	187	0
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	1,146	2,004	43,462	46,795	6,446	5,511
Wigeon	2,107	2,506	141,603	113,566	20,178	15,461
Green-winged Teal	3,290	3,866	291,968	181,077	8,408	11,175
Blue-winged/Cinnamon Teal	887	644	14,721	16,092	374	918
Northern Shoveler	1,516	2,935	166,839	149,449	2,616	4,286
Northern Pintail	702	430	76,760	59,928	1,868	1,837
Wood Duck	37	215	13,319	6,844	2,149	3,062
Redhead	333	286	4,323	2,959	934	765
Canvasback	111	215	15,889	5,919	374	1,072
Greater Scaup	0	0	1,402	555	0	0
Lesser Scaup	111	72	15,072	6,104	1,775	918
Ring-necked Duck	1,442	2,434	20,095	14,057	1,028	2,449
Goldeneyes	0	143	5,491	5,549	5,792	14,084
Bufflehead	111	644	25,937	12,392	1,214	2,143
Ruddy Duck	74	430	3,622	7,768	0	0
Long-tailed Duck	0	0	0	0	0	0
Eiders	0	0	0	0	0	0
Scoters	0	0	753	647	0	0
Hooded Merganser	74	430	467	555	374	459
Other Mergansers	37	286	584	370	280	765
Other Ducks	665	72	0	0	0	153
Total Duck Harvest	14,900±21%	21,400±85%	929,800±14%	727,200±11%	204,400±35%	205,700±34%
Total Active Duck Hunters[a]	2,500±20%	2,900±34%	44,000±12%	38,100±5%	13,800±23%	14,200±12%
Total Duck Hunter Days Afield[a]	11,700±26%	8,100±61%	330,200±11%	241,900±22%	104,500±43%	62,400±27%
Seasonal Duck Harvest Per Hunter[a]	6.0±29%	7.4±92%	21.1±18%	19.1±12%	14.8±42%	14.5±37%
Goose Species Composition						
Canada Goose	687	1,226	30,406	32,113	46,523	50,609
Cackling Goose	0	0	30,220	3,479	1,520	547
Snow Goose	1,717	981	88,421	82,690	1,169	2,188
Blue Goose	0	245	0	268	0	0
Ross' Goose	343	245	19,773	29,169	468	274
White-fronted Goose	0	245	59,693	44,423	468	274
Brant	0	0	1,155	1,931	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	2,700±54%	2,900±120%	229,700±22%	194,100±24%	50,100±40%	53,900±41%
Total Active Goose Hunters[b]	1,300±32%	600±82%	31,600±10%	18,300±8%	11,600±24%	9,200±17%
Total Goose Hunter Days Afield[b]	6,100±44%	1,600±97%	199,800±12%	97,000±17%	65,300±42%	38,900±35%
Seasonal Goose Harvest Per Hunter[b]	2.2±62%	5.0±146%	7.2±25%	10.6±25%	4.3±46%	5.9±45%
Active Waterfowl Hunters[c]	2,600±20%	3,100±32%	47,500±12%	40,200±4%	16,500±21%	16,100±11%
Sample Sizes						
Duck Wings	404	299	7,961	3,934	2,188	1,344
Goose Tails	8	12	1,324	724	429	197

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2021 and 2022 hunting seasons.

	Montana		Nevada		Oregon	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	53,846	37,479	4,615	7,552	135,613	104,544
Domestic Mallard	0	200	0	0	79	0
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	6,618	4,309	3,039	4,796	10,535	6,745
Wigeon	5,816	6,414	4,559	4,079	78,695	54,978
Green-winged Teal	4,412	5,512	10,526	7,938	59,434	41,645
Blue-winged/Cinnamon Teal	2,206	2,104	338	496	550	392
Northern Shoveler	401	1,904	3,208	4,741	22,170	17,568
Northern Pintail	1,805	1,503	1,970	1,929	32,940	22,979
Wood Duck	1,504	701	169	165	7,469	4,941
Redhead	401	802	338	386	0	706
Canvasback	301	501	507	221	4,717	1,333
Greater Scaup	0	100	0	0	6,211	784
Lesser Scaup	401	902	56	165	4,638	2,902
Ring-necked Duck	1,304	1,002	1,576	992	10,692	8,784
Goldeneyes	2,607	10,422	338	221	1,101	2,196
Bufflehead	301	3,908	957	276	7,547	8,705
Ruddy Duck	0	501	225	221	314	235
Long-tailed Duck	0	0	0	0	0	40
Eiders	0	0	0	0	0	0
Scoters	0	0	0	0	196	101
Hooded Merganser	201	301	56	165	1,494	1,412
Other Mergansers	401	701	56	110	708	863
Other Ducks	0	0	0	0	0	0
Total Duck Harvest	82,500±20%	79,300±29%	32,500±39%	34,500±58%	385,100±29%	281,900±23%
Total Active Duck Hunters[a]	11,100±17%	13,300±13%	3,200±29%	2,900±23%	20,100±10%	15,000±9%
Total Duck Hunter Days Afield[a]	49,700±18%	40,000±26%	18,500±37%	11,300±45%	151,800±23%	96,300±17%
Seasonal Duck Harvest Per Hunter[a]	7.4±26%	5.9±32%	10.2±48%	11.7±63%	19.2±31%	18.8±25%
Goose Species Composition						
Canada Goose	64,523	46,617	5,588	4,593	19,404	17,310
Cackling Goose	1,383	1,486	0	230	15,455	16,563
Snow Goose	768	1,351	349	0	8,783	7,597
Blue Goose	0	0	0	0	0	0
Ross' Goose	0	540	0	77	3,404	2,615
White-fronted Goose	3,380	405	0	153	5,855	1,121
Brant	0	0	0	0	0	0
Other Geese	0	0	0	0	0	0
Total Goose Harvest	70,100±20%	50,400±34%	5,900±56%	5,100±78%	52,900±15%	45,200±37%
Total Active Goose Hunters[b]	11,200±15%	10,200±17%	2,400±35%	900±46%	10,600±11%	6,600±15%
Total Goose Hunter Days Afield[b]	48,600±22%	32,600±30%	12,100±58%	3,400±64%	64,500±22%	34,500±27%
Seasonal Goose Harvest Per Hunter[b]	6.3±25%	4.9±38%	2.5±66%	5.4±91%	5.0±19%	6.9±40%
Active Waterfowl Hunters[c]	17,600±12%	15,500±12%	3,200±28%	3,100±23%	21,500±10%	15,800±9%
Sample Sizes						
Duck Wings	823	791	578	625	4,910	3,599
Goose Tails	456	373	34	66	777	363

Table 1D. Preliminary estimates of waterfowl harvest and hunter activity in the Pacific Flyway during the 2021 and 2022 hunting seasons.

	Utah		Washington		Flyway Total	
Duck Species Composition	2021	2022	2021	2022	2021	2022
Mallard	37,585	27,064	188,043	110,483	659,906	527,780
Domestic Mallard	106	165	152	0	523	735
Black Duck	0	0	0	0	0	0
Mallard x Black Hybrid	0	0	0	0	0	0
Mottled Duck	0	0	0	0	0	0
Gadwall	28,611	11,387	14,022	8,431	113,879	89,978
Wigeon	20,799	7,591	88,526	75,124	362,283	279,719
Green-winged Teal	25,338	20,958	41,459	44,294	444,835	316,465
Blue-winged/Cinnamon Teal	4,329	4,786	152	629	23,556	26,062
Northern Shoveler	26,394	8,004	17,660	12,835	240,804	201,722
Northern Pintail	15,309	8,911	22,435	19,379	153,789	116,896
Wood Duck	0	83	3,790	2,391	28,436	18,401
Redhead	2,851	1,485	2,350	1,762	11,529	9,152
Canvasback	2,639	743	3,638	3,272	28,176	13,274
Greater Scaup	0	0	1,895	2,894	9,508	4,334
Lesser Scaup	1,161	990	7,958	5,285	31,173	17,338
Ring-necked Duck	1,689	1,320	10,156	13,590	47,982	44,629
Goldeneyes	5,701	1,073	1,521	507	22,550	34,194
Bufflehead	2,006	1,073	8,640	7,550	46,714	36,692
Ruddy Duck	950	83	303	252	5,489	9,489
Long-tailed Duck	106	0	0	70	106	110
Eiders	0	0	0	0	0	0
Scoters	0	0	562	840	1,511	1,587
Hooded Merganser	106	0	1,667	881	4,439	4,202
Other Mergansers	211	248	910	1,510	3,187	4,854
Other Ducks	106	0	185	126	956	351
Total Duck Harvest	176,000±15%	96,000±24%	416,000±11%	312,100±17%	2,241,300±9%	1,758,000±8%
Total Active Duck Hunters[a]	15,700±13%	14,000±10%	27,300±5%	23,600±6%	137,600	124,000
Total Duck Hunter Days Afield[a]	87,100±13%	42,600±20%	166,100±9%	104,500±13%	919,600±8%	607,100±10%
Seasonal Duck Harvest Per Hunter[a]	11.2±20%	6.9±26%	15.2±12%	13.1±18%		
Goose Species Composition						
Canada Goose	21,482	13,675	32,153	27,161	220,764	193,303
Cackling Goose	0	427	16,189	12,296	64,766	35,028
Snow Goose	1,063	285	21,135	12,296	123,406	107,388
Blue Goose	0	0	0	0	0	513
Ross' Goose	1,063	0	7,083	5,506	32,135	38,426
White-fronted Goose	0	0	450	551	69,846	47,171
Brant	0	0	1,082	506	2,237	2,437
Other Geese	0	0	0	0	0	0
Total Goose Harvest	23,600±31%	14,400±34%	78,100±19%	58,300±30%	513,200±12%	424,300±14%
Total Active Goose Hunters[b]	7,500±15%	6,400±19%	13,800±8%	11,600±11%	90,000	63,700
Total Goose Hunter Days Afield[b]	44,200±23%	17,300±30%	65,600±14%	37,200±22%	506,200±9%	262,600±10%
Seasonal Goose Harvest Per Hunter[b]	3.1±35%	2.3±39%	5.6±21%	5.0±32%		
Active Waterfowl Hunters[c]	16,900±13%	15,700±9%	29,900±5%	26,300±6%	155,700	135,900
Sample Sizes						
Duck Wings	1,667	1,163	5,525	2,550	24,056	14,305
Goose Tails	111	101	689	318	3,828	2,154

Table 1E. Preliminary estimates of waterfowl harvest and hunter activity in Alaska and the United States during the 2021 and 2022 hunting seasons.

	Alaska		United States Total	
Duck Species Composition	2021	2022	2021	2022
Mallard	10,864	10,808	2,541,629	2,042,668
Domestic Mallard	0	0	12,803	5,018
Black Duck	0	0	90,663	61,524
Mallard x Black Hybrid	0	0	3,430	4,177
Mottled Duck	0	0	26,693	15,649
Gadwall	541	727	827,555	807,757
Wigeon	4,424	7,902	598,299	495,783
Green-winged Teal	6,735	5,268	1,446,602	1,351,121
Blue-winged/Cinnamon Teal	98	0	841,091	846,050
Northern Shoveler	1,868	1,544	470,613	423,528
Northern Pintail	4,818	4,541	385,219	276,826
Wood Duck	0	0	1,077,714	764,201
Redhead	0	91	72,176	137,269
Canvasback	0	91	61,321	68,814
Greater Scaup	639	182	31,258	28,701
Lesser Scaup	246	454	132,322	123,913
Ring-necked Duck	442	545	365,154	395,954
Goldeneyes	1,573	3,451	74,282	79,520
Bufflehead	639	727	180,897	171,432
Ruddy Duck	0	0	12,252	24,124
Long-tailed Duck	3,371	735	33,417	17,412
Eiders	0	0	6,524	1,516
Scoters	3,371	2,205	46,408	24,619
Hooded Merganser	49	0	79,255	63,230
Other Mergansers	1,586	980	23,470	25,153
Other Ducks	1,784	1,960	18,360	16,466
Total Duck Harvest	43,000±19%	42,200±17%	9,459,400±4%	8,272,400±5%
Total Active Duck Hunters[a]	4,300±14%	4,600±8%	852,400	815,400
Total Duck Hunter Days Afield[a]	18,100±19%	14,600±14%	5,094,100±4%	3,504,000±4%
Seasonal Duck Harvest Per Hunter[a]	7.7±24%	7.8±19%		
Goose Species Composition				
Canada Goose	459	648	1,784,613	1,422,004
Cackling Goose	2,351	2,268	185,555	130,171
Snow Goose	287	324	281,785	182,081
Blue Goose	0	0	68,434	27,763
Ross' Goose	115	324	75,764	67,084
White-fronted Goose	1,090	324	234,655	149,500
Brant	4,872	1,702	16,755	8,033
Other Geese	0	0	0	388
Total Goose Harvest	9,200±44%	5,600±31%	2,647,600±5%	1,987,000±11%
Total Active Goose Hunters[b]	1,600±26%	1,600±18%	545,300	504,800
Total Goose Hunter Days Afield[b]	6,800±37%	4,700±26%	2,900,200±5%	1,760,500±22%
Seasonal Goose Harvest Per Hunter[b]	2.7±51%	2.5±36%		
Active Waterfowl Hunters[c]	5,600±12%	5,300±7%	991,200	913,700
Sample Sizes				
Duck Wings	721	424	75,019	45,055
Goose Tails	112	23	14,017	8,920

[a] Duck hunter statistics do not include sea duck hunter statistics for states with special sea duck seasons or sea duck permits: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Virginia, California, Oregon, Washington, and Alaska. (Refer to Table 3.)

[b] Goose hunter statistics do not include brant hunter statistics for coastal states with brant seasons: Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, North Carolina, Rhode Island, Virginia, California, Oregon, Washington, and Alaska. (Refer to Table 4.)

[c] Hunter number estimates at the flyway and national levels may be biased high because the HIP sample frames are state-specific; therefore hunters are counted more than once if they hunt in more than one state. Variance inestimable.

[d] Due to paucity of data, we could not calculate a reasonable estimate of goose harvest, active hunters, or days afield for Florida for the 2022-23 hunting season.

Table 2. Flyway-specific point estimates of duck and goose harvest in Colorado, Montana, New Mexico, and Wyoming during the 2021 and 2022 hunting seasons.

	2021		2022	
	Central Flyway	Pacific Flyway	Central Flyway	Pacific Flyway
Duck Harvest				
Colorado	53,600	9,000	40,100	7,900
Montana	22,900	59,700	22,900	56,300
New Mexico	12,500	5,500	9,400	2,800
Wyoming	19,200	3,900	15,100	4,300
Goose Harvest				
Colorado	79,800	1,400	50,800	6,600
Montana	39,300	30,700	25,400	25,000
New Mexico	3,500	800	3,300	1,500
Wyoming	27,100	1,100	23,200	300

Table 3. Preliminary estimates of sea duck harvest and hunter activity for states with special sea duck seasons or sea duck permits during the 2021 and 2022 hunting seasons. [a]

	Sea Duck Harvest [b]		Active Sea Duck Hunters [c]		Sea Duck Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Connecticut	800 ± 84%	100 ± 96%	200 ± 69%	100 ± 61%	1,000 ± 91%	200 ± 71%	3.4 ± 109%	0.8 ± 113%
Delaware	1,400 ± 67%	400 ± 157%	500 ± 56%	100 ± 107%	900 ± 59%	200 ± 108%	2.9 ± 87%	2.9 ± 190%
Maine	3,700 ± 55%	4,100 ± 57%	900 ± 49%	800 ± 47%	2,300 ± 45%	1,600 ± 46%	4.0 ± 74%	5.0 ± 74%
Maryland	22,200 ± 25%	8,400 ± 21%	4,400 ± 18%	2,100 ± 19%	10,400 ± 25%	3,400 ± 22%	5.0 ± 30%	4.0 ± 29%
Massachusetts	9,500 ± 115%	4,100 ± 22%	1,000 ± 96%	800 ± 17%	2,200 ± 101%	1,900 ± 20%	9.4 ± 149%	5.0 ± 28%
New Hampshire	300 ± 101%	400 ± 89%	100 ± 98%	100 ± 87%	300 ± 82%	200 ± 68%	2.1 ± 140%	4.5 ± 124%
New Jersey	7,400 ± 52%	2,400 ± 46%	1,300 ± 32%	600 ± 33%	4,900 ± 51%	1,300 ± 39%	5.6 ± 61%	4.1 ± 56%
New York	4,300 ± 73%	2,800 ± 42%	1,200 ± 40%	800 ± 36%	4,700 ± 54%	2,100 ± 46%	3.6 ± 84%	3.6 ± 56%
Rhode Island	2,300 ± 54%	500 ± 70%	400 ± 31%	100 ± 70%	1,000 ± 34%	200 ± 64%	5.1 ± 62%	3.3 ± 99%
Virginia	12,600 ± 59%	2,200 ± 52%	2,000 ± 49%	1,000 ± 37%	4,700 ± 60%	1,900 ± 42%	6.4 ± 76%	2.2 ± 63%
Atlantic Flyway Total	64,300 ± 24%	25,400 ± 15%	12,100	6,600	32,400 ± 18%	13,200 ± 14%		
California	800 ± 58%	600 ± 58%	100 ± 38%	200 ± 38%	300 ± 53%	200 ± 45%	5.7 ± 69%	4.2 ± 69%
Oregon	200 ± 63%	100 ± 87%	100 ± 38%	100 ± 62%	200 ± 49%	100 ± 66%	2.3 ± 74%	2.0 ± 107%
Washington	2,100 ± 30%	1,400 ± 39%	800 ± 16%	400 ± 28%	2,800 ± 28%	1,100 ± 43%	2.7 ± 34%	3.9 ± 48%
Pacific Flyway Total	3,100 ± 26%	2,200 ± 31%	1,000	600	3,300 ± 24%	1,400 ± 34%		
Alaska	10,100 ± 33%	5,900 ± 28%	2,000 ± 25%	1,300 ± 22%	5,900 ± 29%	2,800 ± 26%	5.0 ± 41%	4.6 ± 36%
United States Total	77,500 ± 20%	33,400 ± 12%	15,100	8,400	41,600 ± 15%	17,400 ± 12%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Sea ducks include long-tailed ducks, eiders, and scoters in the Atlantic Flyway; long-tailed ducks, scoters, and harlequin ducks in California and Oregon; long-tailed ducks, scoters, harlequin ducks, and goldeneyes in Washington; and long-tailed ducks, eiders, scoters, harlequin ducks, and mergansers in Alaska.

[c] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 4. Preliminary estimates of brant harvest and hunter activity for states with special sea duck seasons or sea duck permits during the 2021 and 2022 hunting seasons. [a]

	Brant Harvest		Active Brant Hunters [b]		Brant Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Connecticut	100 ± 192%	100 ± 139%	<50 ± 134%	100 ± 109%	200 ± 151%	400 ± 113%	1.5 ± 234%	0.6 ± 177%
Delaware	100 ± 88%	<50 ± 141%	100 ± 57%	200 ± 86%	400 ± 77%	300 ± 88%	0.6 ± 105%	0.3 ± 165%
Maine	0	0	0	0	0	0	0	0
Maryland	100 ± 192%	100 ± 172%	100 ± 148%	200 ± 85%	200 ± 164%	200 ± 92%	0.6 ± 243%	0.6 ± 192%
Massachusetts	500 ± 186%	200 ± 45%	500 ± 131%	300 ± 32%	1,900 ± 165%	500 ± 44%	1.0 ± 228%	0.8 ± 55%
New Hampshire	0	0	100 ± 194%	0	100 ± 194%	0	0	0
New Jersey	2,100 ± 47%	1,600 ± 32%	1,200 ± 31%	1,200 ± 20%	3,900 ± 34%	2,800 ± 25%	1.7 ± 56%	1.3 ± 38%
New York	3,600 ± 69%	1,200 ± 43%	1,200 ± 46%	800 ± 35%	4,900 ± 54%	2,100 ± 46%	2.9 ± 82%	1.5 ± 56%
North Carolina	2,500 ± 176%	100 ± 67%	600 ± 87%	900 ± 37%	3,700 ± 119%	2,300 ± 49%	4.0 ± 196%	0.1 ± 76%
Rhode Island	400 ± 70%	100 ± 130%	300 ± 42%	100 ± 70%	700 ± 37%	300 ± 74%	1.4 ± 81%	0.5 ± 147%
Virginia	100 ± 94%	200 ± 97%	500 ± 79%	500 ± 47%	700 ± 64%	1,000 ± 52%	0.2 ± 123%	0.4 ± 108%
Atlantic Flyway Total	9,400 ± 55%	3,700 ± 22%	4,700	4,200	16,600 ± 37%	10,000 ± 18%		
California	1,200 ± 75%	600 ± 91%	500 ± 73%	500 ± 52%	1,200 ± 48%	1,400 ± 62%	2.5 ± 105%	1.1 ± 105%
Oregon	0	0	<50 ± 196%	<50 ± 137%	<50 ± 196%	<50 ± 144%	0	0
Washington	900 ± 47%	100 ± 61%	600 ± 43%	100 ± 52%	1,300 ± 61%	200 ± 63%	1.4 ± 64%	1.4 ± 81%
Pacific Flyway Total	2,000 ± 48%	700 ± 74%	1,100	700	2,600 ± 39%	1,500 ± 54%		
Alaska	4,900 ± 43%	1,700 ± 29%	600 ± 36%	500 ± 28%	3,000 ± 40%	1,400 ± 30%	8.8 ± 56%	3.1 ± 40%
United States Total	16,300 ± 35%	6,100 ± 18%	6,400	5,400	22,200 ± 29%	12,900 ± 16%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 5. Preliminary harvest estimates for special September teal and teal/wood duck seasons during the 2021 and 2022 hunting seasons.

	Harvest										Number of wings received	
	Green-winged teal		Blue-winged teal		Wood ducks		Other ducks		Total duck harvest			
State	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
September Teal Seasons												
Delaware	92	311	0	881	0	0	0	0	92	1,191	1	23
Georgia	0	0	0	3,197	0	0	0	0	0	3,197	0	12
Maryland	138	214	138	0	0	0	0	0	276	214	2	1
North Carolina	203	807	2,435	404	0	0	0	0	2,638	1,211	13	3
South Carolina	0	386	1,752	386	0	0	0	0	1,752	771	18	2
Virginia	96	582	96	0	0	0	0	0	192	582	2	3
Atlantic Flyway Total	528	2,300	4,420	4,866	0	0	0	0	4,948	7,166	36	44
Alabama	244	0	8,068	3,101	0	0	0	0	8,313	3,101	34	8
Arkansas	2,606	531	8,601	10,097	0	0	0	0	11,207	10,628	43	20
Illinois	3,024	2,601	12,624	14,044	0	0	0	0	15,648	16,644	119	64
Indiana	2,960	796	3,823	1,990	0	0	0	0	6,783	2,786	55	21
Iowa	6,175	1,347	15,719	9,539	0	0	0	0	21,894	10,886	195	97
Louisiana	3,505	1,488	115,531	76,998	0	0	125	0	119,161	78,486	952	422
Michigan	2,086	2,721	3,302	6,279	0	0	0	0	5,388	9,000	31	43
Minnesota	6,523	2,656	41,794	46,806	0	0	0	0	48,316	49,462	200	149
Mississippi	201	0	1,611	1,052	201	0	0	0	2,014	1,052	10	4
Missouri	5,056	2,435	18,476	15,496	0	0	0	0	23,532	17,931	121	81
Ohio	5,618	577	8,763	4,040	0	0	0	0	14,381	4,618	64	40
Wisconsin	1,925	791	9,331	6,526	0	198	296	0	11,553	7,515	78	38
Mississippi Flyway Total	39,924	15,943	247,643	195,968	201	198	421	0	288,190	212,109	1,902	987
Colorado	439	325	658	488	0	0	0	81	1,096	894	10	11
Kansas	9,899	2,984	26,868	10,004	0	0	0	0	36,767	12,987	208	74
Nebraska	9,043	3,673	17,068	13,118	0	0	0	0	26,111	16,791	231	192
New Mexico	200	22	423	174	0	0	0	0	623	196	28	18
Oklahoma	3,736	0	10,108	4,697	0	0	0	0	13,844	4,697	63	11
Texas	12,995	18,867	151,830	171,753	0	0	133	325	164,958	190,945	1,244	587
Central Flyway Total	36,311	25,870	206,956	200,233	0	0	133	407	243,400	226,510	1,784	893
Season Type Total	76,764	44,113	459,019	401,068	201	198	554	407	536,538	445,785	3,722	1,924
September Teal/Wood Duck Seasons												
Florida	125	0	14,080	1,681	3,863	1,293	0	0	18,067	2,974	145	23
Kentucky	0	205	921	409	5,755	3,071	0	0	6,676	3,685	58	18
Tennessee	0	0	818	990	5,727	6,932	0	0	6,545	7,922	24	8
Season Type Total	125	205	15,819	3,080	15,344	11,296	0	0	31,288	14,581	227	49
U.S. Total	76,889	44,317	474,838	404,149	15,546	11,493	554	407	567,826	460,366	3,949	1,973

Table 6. Preliminary estimates of the number of Canada geese harvested during the special September, regular, and special late seasons during the 2021 and 2022 hunting seasons.

	September		Regular		Late		Total	
State / Flyway	2021	2022	2021	2022	2021	2022	2021	2022
Connecticut	700	2,100	4,100	1,600	600	1,900	5,400	5,500
Delaware	3,100	700	5,400	9,500	0	0	8,500	10,200
Florida	0	NA	0	NA	0	0	0	NA
Georgia	7,800	400	13,300	3,100	0	0	21,100	3,500
Maine	5,700	5,200	4,500	3,000	0	0	10,100	8,200
Maryland	5,900	700	46,500	43,000	0	0	52,400	43,700
Massachusetts	1,300	2,200	2,300	3,700	1,100	3,200	4,700	9,100
New Hampshire	1,400	0	2,400	3,500	0	0	3,800	3,500
New Jersey	1,700	4,800	7,500	5,200	1,400	1,100	10,600	11,200
New York	40,900	56,700	27,000	11,900	0	6,700	68,000	75,200
North Carolina	15,600	2,100	17,800	26,800	0	0	33,400	28,900
Pennsylvania	15,300	16,900	24,200	25,500	0	0	39,500	42,400
Rhode Island	500	100	1,400	1,300	100	0	2,000	1,400
South Carolina	6,600	1,300	1,300	2,200	0	0	8,000	3,500
Vermont	3,800	0	2,400	14,700	0	1,000	6,200	15,700
Virginia	0	3,300	9,500	5,400	11,200	14,900	20,800	23,600
West Virginia	1,500	900	4,400	2,200	0	0	5,900	3,100
Atlantic Flyway Total	111,900	97,200	174,100	162,700	14,400	28,700	300,400	288,700
Alabama	0	0	15,400	4,800	0	0	15,400	4,800
Arkansas	0	0	11,100	37,600	0	0	11,100	37,600
Illinois	0	0	66,800	51,500	0	0	66,800	51,500
Indiana	0	0	44,100	32,700	0	0	44,100	32,700
Iowa	0	0	24,200	27,800	0	0	24,200	27,800
Kentucky	0	0	27,200	10,600	0	0	27,200	10,600
Louisiana	0	0	0	0	0	0	0	0
Michigan	0	0	149,000	87,500	0	0	149,000	87,500
Minnesota	0	0	144,200	119,700	0	0	144,200	119,700
Mississippi	0	0	11,000	1,100	0	0	11,000	1,100
Missouri	0	0	47,300	31,300	0	0	47,300	31,300
Ohio	0	0	87,000	50,300	0	0	87,000	50,300
Tennessee	0	0	12,400	13,900	0	0	12,400	13,900
Wisconsin	0	0	134,300	101,900	0	0	134,300	101,900
Mississippi Flyway Total	0	0	773,900	570,700	0	0	773,900	570,700
Colorado	0	0	46,600	33,600	0	0	46,600	33,600
Kansas	0	0	90,100	60,900	0	0	90,100	60,900
Montana	0	0	34,900	23,000	0	0	34,900	23,000
Nebraska	0	0	91,200	69,800	0	0	91,200	69,800
New Mexico	0	0	2,400	2,200	0	0	2,400	2,200
North Dakota	33,600	8,300	62,600	56,600	0	0	96,200	65,000
Oklahoma	2,300	0	32,700	48,000	0	0	34,900	48,000
South Dakota	19,700	12,300	54,100	30,000	0	0	73,800	42,300
Texas	0	0	25,200	17,400	0	0	25,200	17,400
Wyoming	0	0	25,500	21,300	0	0	25,500	21,300
Central Flyway Total	55,500	20,600	465,300	362,800	0	0	520,800	383,400
Arizona	0	0	700	1,200	0	0	700	1,200
California	0	0	30,400	32,100	0	0	30,400	32,100
Colorado	0	300	1,200	6,200	0	0	1,200	6,500
Idaho	2,000	500	44,500	50,100	0	0	46,500	50,600
Montana	0	0	29,600	23,600	0	0	29,600	23,600
Nevada	0	0	5,600	4,600	0	0	5,600	4,600
New Mexicco	0	0	800	1,500	0	0	800	1,500
Oregon	3,500	1,200	15,900	16,100	0	0	19,400	17,300
Utah	0	0	21,500	13,700	0	0	21,500	13,700
Washington	4,200	3,100	28,000	24,000	0	0	32,200	27,200
Wyoming	100	100	1,000	200	0	0	1,100	300
Pacific Flyway Total	9,800	5,300	179,300	173,200	0	0	189,100	178,600
Alaska	0	0	500	600	0	0	500	600
United States Total	177,200	123,200	1,593,000	1,270,100	14,400	28,700	1,784,600	1,422,000

Table 7. Waterfowl harvest estimates in Canada during the 2021 and 2022 hunting seasons (estimates courtesy of the Canadian Wildlife Service). [a]

	Newfoundland		Prince Edward Isl.		Nova Scotia		New Brunswick		Quebec		Ontario		Manitoba	
Duck Species Composition	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Mallard	115		1,202		2,453		3,344		36,887		55,758		24,494	
Black Duck	3,796		3,060		12,507		6,794		15,879		7,447		49	
Gadwall	1		92		20		76		757		1,702		2,344	
Wigeon	41		58		189		517		1,185		3,565		1,532	
Green-winged Teal	1,072		410		2,090		2,951		15,575		10,001		4,855	
Blue-winged/Cinnamon Teal	23		58		203		594		1,101		2,869		4,444	
Northern Shoveler	2		4		7		48		248		489		1,380	
Northern Pintail	101		27		125		164		2,684		2,852		4,567	
Wood Duck	80		19		282		2,436		11,149		37,143		987	
Redhead	2		0		2		6		94		3,643		1,209	
Canvasback	0		0		3		0		21		1,901		2,666	
Greater Scaup	323		9		570		153		1,703		7,058		98	
Lesser Scaup	374		23		116		127		1,732		10,929		3,037	
Ring-necked Duck	2131		55		515		1,442		3,662		10,256		906	
Goldeneyes	603		35		327		2,027		1,865		5,084		321	
Bufflehead	7		6		655		126		856		8,322		608	
Ruddy Duck	0		1		2		7		10		529		45	
Long-tailed Duck	267		9		293		149		803		917		1	
Eiders	5,723		2		652		306		1,825		18		5	
Scoters	385		15		1,750		976		2,094		524		19	
Hooded Merganser	83		9		145		78		1,609		5,062		273	
Other Mergansers	1,623		84		762		84		1,079		1,392		5	
Other Ducks	2		0		6		0		5		8		0	
Total Duck Harvest	16,754		5,178		23,674		22,405		102,823		177,469		53,845	
Goose Species Composition														
Canada Goose	2,663		10,955		8,720		13,547		110,126		149,445		46,285	
Snow Goose	3		0		17		136		66,884		98		2,446	
Blue Goose	0		0		0		0		0		0		0	
Ross's Goose	0		5		0		0		1		6		264	
White-fronted Goose	0		0		7		0		4		8		54	
Brant	3		0		0		0		5		45		0	
Total Goose Harvest	2,669		10,960		8,744		13,683		177,020		149,602		49,049	
Migratory Bird Permits Sold	11,412		1,201		4,470		5,017		28,889		48,549		6,694	

Table 7 (continued). Waterfowl harvest estimates in Canada during the 2021 and 2022 hunting seasons (estimates courtesy of the Canadian Wildlife Service).

	Saskatchewan		Alberta		British Columbia		Nunavut		Northwest Terr.		Yukon Territory		Canada Total	
Duck Species Composition	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
Mallard	70,233		63,840		23,439		0		269		163		282,197	
Black Duck	19		10		2		0		0		0		49,563	
Gadwall	5,743		14,303		458		0		0		0		25,496	
Wigeon	3,710		8,541		6,532		0		207		259		26,336	
Green-winged Teal	3,282		4,848		1,941		0		84		8		47,117	
Blue-winged/Cinnamon Teal	6,228		4,541		368		0		6		0		20,435	
Northern Shoveler	1,976		3,777		1,001		0		22		201		9,155	
Northern Pintail	9,516		11,890		3,002		0		39		93		35,060	
Wood Duck	680		36		50		0		0		0		52,862	
Redhead	674		1,954		31		0		7		0		7,622	
Canvasback	569		967		59		0		16		0		6,202	
Greater Scaup	24		174		22		0		16		0		10,150	
Lesser Scaup	914		2,398		221		0		97		4		19,972	
Ring-necked Duck	249		455		220		0		44		0		19,935	
Goldeneyes	243		927		366		0		10		57		11,865	
Bufflehead	340		2,080		678		0		61		21		13,760	
Ruddy Duck	34		232		11		0		7		0		878	
Long-tailed Duck	0		0		1		0		3		0		2,443	
Eiders	0		0		1		0		5		0		8,537	
Scoters	10		13		133		0		68		0		5,987	
Hooded Merganser	248		122		96		0		0		0		7,725	
Other Mergansers	0		78		46		0		12		0		5,165	
Other Ducks	0		0		1		0		0		0		22	
Total Duck Harvest	104,692		121,186		38,679		0		973		806		668,484	
Goose Species Composition														
Canada Goose	116,964		122,994		12,641		0		39		198		594,577	
Snow Goose	30,739		23,640		3,218		0		59		4		127,244	
Blue Goose	0		0		0		0		0		0		0	
Ross's Goose	15,513		1,712		23		0		0		0		17,524	
White-fronted Goose	20,258		27,989		85		0		9		4		48,418	
Brant	0		0		0		0		0		0		53	
Total Goose Harvest	183,474		176,335		15,967		0		107		206		787,816	
Migratory Bird Permits Sold	11,648		22,483		7,298		61		254		305		148,281	

[a] Canadian harvest estimates for the 2022-23 hunting season were not available as of the release date of this report.

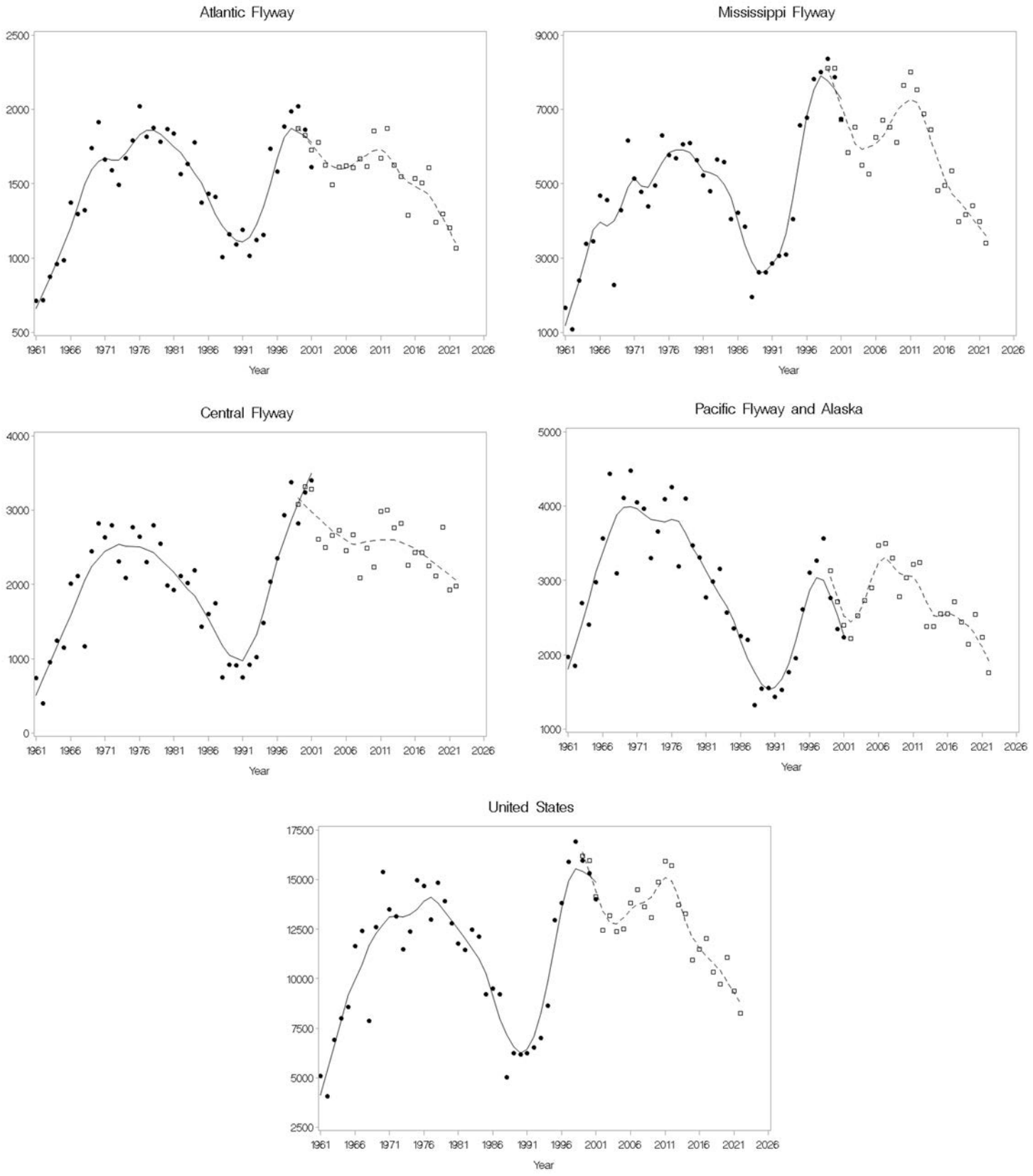

Figure 1. Number of ducks harvested (in thousands) by hunters in the United States, 1961–2022. (Federal Duck Stamp Survey – circles and solid line; HIP survey – squares and dashed line.)

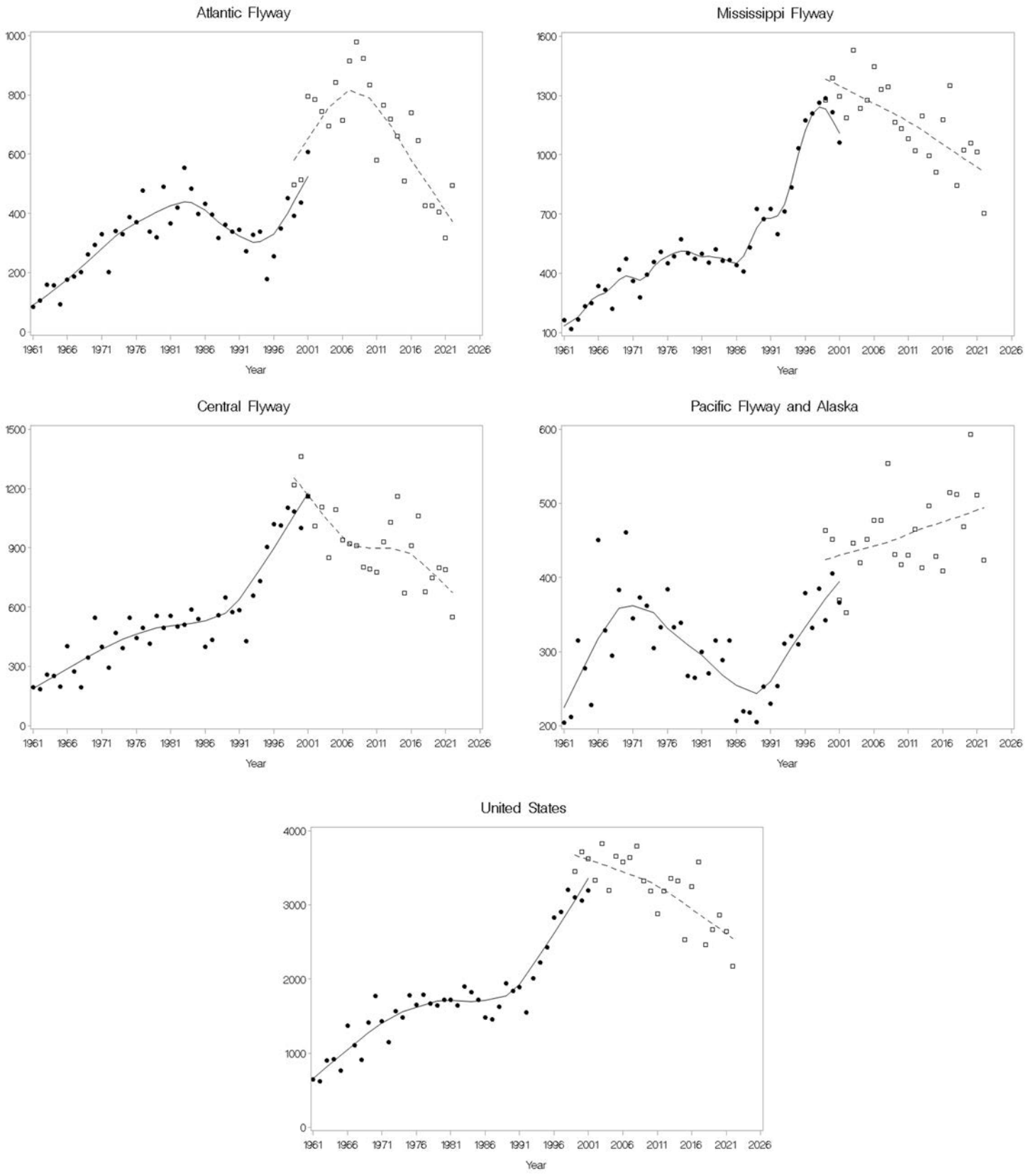

Figure 2. Number of geese harvested (in thousands) by hunters in the United States, 1961–2022. (Federal Duck Stamp Survey – circles and solid line; HIP survey – squares and dashed line.)

Table 8. Preliminary weighted age ratios of mallards in state harvests during the 2018-2022 hunting seasons as determined from the Waterfowl Parts Collection Survey.

	Immatures per adult [a]				
State and Flyway	2018	2019	2020	2021	2022
Connecticut	1.0	1.2	1.0	0.9	1.1
Delaware	1.5	2.8	1.7	1.6	0.8
Florida	---	---	---	---	---
Georgia	---	0.5	0.6	0.7	0.6
Maine	1.6	1.6	1.3	0.4	1.4
Maryland	1.1	1.1	0.8	1.1	1.0
Massachusetts	1.3	1.0	2.2	1.2	1.1
New Hampshire	2.3	2.4	1.8	0.4	1.6
New Jersey	1.2	1.4	0.7	0.8	0.5
New York	1.6	1.7	1.5	1.3	1.1
North Carolina	0.8	0.8	1.0	0.8	1.3
Pennsylvania	1.0	1.2	1.0	1.1	1.1
Rhode Island	0.9	1.5	1.2	0.6	1.0
South Carolina	1.2	1.2	1.2	2.8	---
Vermont	1.6	1.3	1.9	1.4	2.1
Virginia	0.8	0.8	0.8	0.7	1.0
West Virginia	0.8	0.8	0.7	0.7	0.6
Atlantic Flyway Total [b]	1.12	1.19	1.06	0.98	1.09
Alabama	1.1	2.7	1.1	1.3	0.7
Arkansas	0.8	0.7	0.7	0.5	0.7
Illinois	1.3	1.3	1.6	1.1	1.6
Indiana	1.0	1.4	1.4	1.1	1.2
Iowa	2.0	2.0	1.7	1.6	2.4
Kentucky	0.7	1.0	1.0	0.7	1.1
Louisiana	0.7	0.6	0.9	0.5	0.9
Michigan	1.4	1.7	1.9	1.5	1.8
Minnesota	3.0	2.5	3.5	2.0	4.3
Mississippi	0.6	0.7	0.6	0.3	0.5
Missouri	1.2	1.0	1.2	0.9	1.2
Ohio	1.3	1.6	1.4	1.2	1.2
Tennessee	0.8	1.0	1.0	0.5	0.4
Wisconsin	2.2	2.2	2.4	2.5	3.1
Mississippi Flyway Total [b]	1.07	1.05	1.19	0.85	1.12

Table 8 (continued). Preliminary weighted age ratios of mallards in state harvests during the 2018-2022 hunting seasons as determined from the Waterfowl Parts Collection Survey.

	Immatures per adult [a]				
State and Flyway	2018	2019	2020	2021	2022
Colorado	0.7	0.9	1.0	0.8	1.0
Kansas	0.6	0.5	0.6	0.5	0.7
Montana	1.1	1.1	0.8	0.6	1.4
Nebraska	0.9	1.1	0.7	0.7	0.8
New Mexico	0.7	2.3	1.2	1.1	1.2
North Dakota	2.2	1.6	1.5	0.8	2.4
Oklahoma	0.4	0.5	0.5	0.4	0.7
South Dakota	1.6	2.0	1.7	1.0	1.6
Texas	0.6	0.7	0.5	0.5	0.7
Wyoming	0.8	0.6	0.6	0.5	1.1
Central Flyway Total [b]	0.90	0.92	0.82	0.59	1.01
Arizona	0.8	1.0	0.8	1.2	0.6
California	1.3	1.7	1.2	0.8	1.2
Colorado	1.4	5.7	3.1	2.4	2.3
Idaho	0.7	0.8	0.7	0.7	0.8
Montana	0.8	0.9	0.8	0.7	1.3
Nevada	1.6	1.6	0.5	0.5	1.4
New Mexico	---	1.1	0.7	0.4	0.8
Oregon	1.0	1.1	1.1	1.1	1.6
Utah	0.9	1.1	1.0	0.7	1.6
Washington	0.9	1.0	1.2	0.8	1.0
Wyoming	1.5	2.4	1.8	1.4	---
Pacific Flyway Total [b]	0.94	1.13	1.02	0.81	1.12
Alaska	1.7	4.7	3.3	2.9	3.3
U.S. Total [b]	1.00	1.06	1.05	0.79	1.10

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 9. Preliminary weighted age ratios of ducks harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Immatures per adult [a, b]				
Species and Flyway	2018	2019	2020	2021	2022
Mallard					
Atlantic	1.12	1.19	1.06	0.98	1.09
Mississippi	1.07	1.05	1.19	0.85	1.12
Central	0.90	0.92	0.82	0.59	1.01
Pacific	0.94	1.13	1.02	0.81	1.12
U.S. Total	1.00	1.06	1.05	0.79	1.10
Black duck					
Atlantic	1.13	1.71	1.48	1.31	0.87
Mississippi	0.99	1.76	2.16	1.56	1.51
U.S. Total	1.11	1.72	1.60	1.35	0.95
Mottled duck					
Atlantic	1.91	2.90	2.01	2.01	1.53
Mississippi	2.49	1.06	1.10	1.38	1.17
Central	---	1.64	1.05	1.15	---
U.S. Total	2.00	1.65	1.31	1.65	1.50
Gadwall					
Atlantic	0.92	0.71	0.70	0.50	2.75
Mississippi	1.10	1.05	1.06	0.50	1.27
Central	1.10	1.25	1.31	0.57	1.25
Pacific	1.05	1.45	0.92	0.52	1.02
U.S. Total	1.08	1.14	1.12	0.53	1.29
American wigeon					
Atlantic	0.60	1.07	1.00	1.62	1.30
Mississippi	1.97	1.46	1.64	2.29	2.28
Central	0.97	1.15	1.13	1.50	1.08
Pacific	1.16	1.21	1.10	1.19	1.66
U.S. Total	1.12	1.24	1.16	1.39	1.55
Green-winged teal					
Atlantic	1.42	1.78	1.82	1.82	1.69
Mississippi	1.01	1.30	1.80	1.59	1.84
Central	1.36	1.81	1.49	2.01	2.15
Pacific	0.75	1.10	0.83	0.84	1.17
U.S. Total	0.99	1.34	1.33	1.39	1.71
Blue-winged/Cinnamon teal					
Atlantic	0.94	1.31	2.25	1.34	1.82
Mississippi	1.76	1.36	1.58	1.03	1.96
Central	1.59	1.74	1.53	1.44	1.64
Pacific	1.28	0.81	0.71	1.31	1.72
U.S. Total	1.57	1.44	1.54	1.20	1.80

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Immatures per adult [a, b]				
Species and Flyway	2018	2019	2020	2021	2022
Northern shoveler					
Atlantic	1.27	0.82	1.09	0.88	1.72
Mississippi	1.17	1.48	1.43	0.89	1.98
Central	1.71	2.64	2.26	1.17	1.91
Pacific	0.92	0.99	1.11	1.09	1.28
U.S. Total	1.14	1.46	1.45	1.04	1.58
Northern pintail					
Atlantic	0.40	1.56	1.84	0.91	2.35
Mississippi	0.89	1.29	1.62	1.60	1.75
Central	1.02	1.38	1.18	1.43	1.10
Pacific	0.62	0.99	0.84	0.79	0.99
U.S. Total	0.72	1.17	1.12	1.15	1.24
Wood duck					
Atlantic	1.38	1.41	0.93	1.25	1.30
Mississippi	1.34	1.45	1.01	0.96	1.05
Central	1.33	1.74	1.12	1.08	1.22
Pacific	1.99	1.53	1.82	1.17	1.44
U.S. Total	1.37	1.46	1.00	1.06	1.16
Redhead					
Atlantic	0.48	0.77	1.01	0.70	2.24
Mississippi	1.08	1.83	2.18	0.82	3.17
Central	1.79	1.81	1.81	0.85	2.15
Pacific	1.27	3.05	1.53	0.58	1.93
U.S. Total	1.17	1.73	1.79	0.76	2.39
Canvasback					
Atlantic	0.18	---	0.60	0.51	1.92
Mississippi	1.04	1.42	1.82	1.19	1.42
Central	0.95	1.22	2.11	0.84	1.27
Pacific	1.04	1.23	1.08	0.99	1.08
U.S. Total	0.73	1.30	1.44	0.99	1.32
Greater scaup					
Atlantic	0.37	0.96	0.75	0.83	3.05
Mississippi	1.44	2.39	1.95	1.61	1.90
Central	---	0.70	---	---	---
Pacific	1.44	1.86	1.27	0.70	1.49
U.S. Total	0.88	1.59	1.27	1.01	2.30

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Immatures per adult [a, b]				
Species and Flyway	2018	2019	2020	2021	2022
Lesser scaup					
Atlantic	0.39	0.90	0.76	1.77	0.85
Mississippi	0.52	1.18	0.68	1.38	1.18
Central	0.85	0.89	0.92	1.03	1.55
Pacific	1.52	2.71	2.18	1.40	3.33
U.S. Total	0.62	1.16	0.87	1.36	1.31
Ring-necked duck					
Atlantic	1.33	1.56	1.64	1.62	2.44
Mississippi	1.69	1.47	1.82	1.66	1.67
Central	0.97	1.19	0.97	1.70	1.46
Pacific	1.54	2.93	1.93	3.00	1.88
U.S. Total	1.39	1.55	1.50	1.79	1.79
Common goldeneye					
Atlantic	0.82	0.89	1.12	0.56	0.44
Mississippi	0.92	1.51	0.81	0.66	1.16
Central	0.77	0.95	0.31	0.54	0.42
Pacific	0.94	1.26	0.70	1.18	0.87
U.S. Total	0.90	1.25	0.65	0.73	0.79
Bufflehead					
Atlantic	1.10	1.04	0.98	0.92	1.25
Mississippi	1.16	1.14	0.89	0.96	0.93
Central	0.87	0.95	0.69	0.60	0.75
Pacific	1.26	1.34	1.19	1.10	1.05
U.S. Total	1.11	1.10	0.94	0.93	1.04
Ruddy duck					
Atlantic	0.67	2.99	5.67	---	1.33
Mississippi	5.23	5.00	2.18	---	---
Central	1.48	3.25	1.94	---	4.04
Pacific	2.42	2.48	1.24	1.89	2.47
U.S. Total	1.45	3.56	2.27	1.07	2.32
Hooded merganser					
Atlantic	0.87	1.07	1.07	0.91	0.93
Mississippi	1.04	1.38	1.44	1.07	1.19
Central	1.09	0.43	0.83	0.45	0.52
Pacific	0.88	1.94	0.91	3.25	1.25
U.S. Total	0.96	1.24	1.23	1.01	1.00

Table 9 (continued). Preliminary weighted age ratios of ducks harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Immatures per adult [a, b]				
Species and Flyway	2018	2019	2020	2021	2022
Common merganser					
Atlantic	1.46	1.22	1.92	1.42	1.80
Mississippi	---	1.34	0.66	---	---
Central	---	---	---	---	0.41
Pacific	0.73	1.12	2.33	1.68	1.46
U.S. Total	0.85	1.19	1.40	1.25	1.56
Red-breasted merganser					
Atlantic	0.45	1.10	2.45	0.96	1.08
Mississippi	1.33	---	4.28	5.69	---
U.S. Total	0.70	0.79	2.03	1.41	1.39
Long-tailed duck					
Atlantic	1.13	1.64	0.44	0.59	0.91
Mississippi	0.48	0.46	0.43	0.75	0.74
U.S. Total	0.69	0.29	0.99	0.13	0.00
Common eider					
Atlantic	0.69	0.29	0.99	0.13	---
U.S. Total	0.69	0.31	1.03	0.13	---
Black scoter					
Atlantic	0.29	0.25	0.55	0.49	0.68
U.S. Total	0.31	0.26	0.61	0.45	0.89
White-winged scoter					
Atlantic	---	0.60	1.43	1.28	---
Pacific	---	---	---	---	---
U.S. Total	2.97	0.87	1.86	1.71	2.46
Surf scoter					
Atlantic	0.17	0.71	0.70	0.34	0.88
Pacific	0.78	0.50	0.22	1.03	0.20
U.S. Total	0.20	0.68	0.64	0.37	0.99

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 10. Preliminary weighted sex ratios of mallards in state harvests during the 2018-2022 hunting seasons as determined from the Waterfowl Parts Collection Survey.

	Males per female [a]				
State and Flyway	2018	2019	2020	2021	2022
Connecticut	2.2	1.4	1.5	2.2	3.1
Delaware	1.9	1.0	1.4	1.5	2.6
Florida	---	---	---	---	---
Georgia	---	1.4	1.5	1.3	3.0
Maine	2.0	2.4	1.6	2.7	1.9
Maryland	1.9	1.8	2.1	2.0	2.1
Massachusetts	2.1	2.1	1.5	2.2	3.6
New Hampshire	1.4	1.5	1.9	2.7	1.7
New Jersey	2.0	1.6	2.4	2.0	2.8
New York	2.3	2.1	1.9	2.6	2.7
North Carolina	2.2	2.1	2.1	2.4	1.7
Pennsylvania	2.1	1.9	2.1	2.6	2.5
Rhode Island	1.3	2.1	2.0	2.0	2.1
South Carolina	2.1	1.7	1.6	1.6	---
Vermont	2.2	1.6	1.9	1.6	2.3
Virginia	2.0	2.0	2.9	2.9	2.6
West Virginia	2.3	2.8	1.4	3.5	3.5
Atlantic Flyway Total [b]	2.06	1.85	2.02	2.24	2.24
Alabama	3.7	2.4	1.8	1.9	3.1
Arkansas	3.6	3.9	4.6	3.9	3.8
Illinois	2.2	2.2	2.4	2.5	1.9
Indiana	1.8	2.3	1.9	3.2	1.9
Iowa	2.4	2.5	1.8	2.1	2.1
Kentucky	2.1	2.2	2.4	3.2	3.7
Louisiana	3.4	4.5	3.7	2.8	3.7
Michigan	1.6	1.8	1.4	1.5	2.0
Minnesota	1.6	1.5	1.4	1.5	1.8
Mississippi	4.9	3.5	5.6	5.9	3.3
Missouri	3.2	4.0	3.5	3.2	3.5
Ohio	2.3	2.0	2.1	2.1	1.6
Tennessee	2.0	3.0	2.0	3.7	7.4
Wisconsin	2.0	2.2	1.7	1.6	1.7
Mississippi Flyway Total [b]	2.59	2.82	2.60	2.80	2.79

Table 10 (continued). Preliminary weighted sex ratios of mallards in state harvests during the 2018-2022 hunting seasons as determined from the Waterfowl Parts Collection Survey.

	Males per female [a]				
State and Flyway	2018	2019	2020	2021	2022
Colorado	3.9	2.7	3.2	3.0	4.7
Kansas	5.4	6.7	5.4	4.7	5.1
Montana	2.3	4.9	3.1	3.5	2.9
Nebraska	4.5	4.5	4.5	4.5	5.4
New Mexico	1.5	2.2	2.1	3.3	1.9
North Dakota	2.3	2.4	2.8	3.1	1.8
Oklahoma	5.0	4.0	4.1	4.1	3.2
South Dakota	5.8	4.1	3.0	3.2	4.1
Texas	4.1	3.6	3.4	3.7	2.4
Wyoming	3.4	4.5	4.1	4.3	3.2
Central Flyway Total [b]	3.58	3.65	3.59	3.84	3.04
Arizona	2.0	2.2	1.7	2.4	2.3
California	2.6	2.6	2.6	2.5	2.8
Colorado	1.7	1.9	1.2	1.7	1.9
Idaho	3.2	2.8	3.3	5.2	5.2
Montana	2.5	3.8	4.6	4.9	3.8
Nevada	1.7	1.6	2.7	1.7	1.6
New Mexico	---	1.8	2.4	2.5	2.1
Oregon	1.9	2.1	2.3	2.4	1.9
Utah	2.3	2.1	2.5	2.5	2.1
Washington	2.7	2.3	2.3	2.7	2.1
Wyoming	2.4	1.8	2.5	1.3	---
Pacific Flyway Total [b]	2.56	2.44	2.67	3.01	2.71
Alaska	1.6	1.4	1.4	1.4	1.2
U.S. Total [b]	2.68	2.74	2.71	2.96	2.74

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 11. Preliminary weighted sex ratios of ducks harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Males per female [a]				
Species and Flyway	2018	2019	2020	2021	2022
Mallard					
Atlantic	2.06	1.85	2.02	2.24	2.24
Mississippi	2.59	2.82	2.60	2.80	2.79
Central	3.58	3.65	3.59	3.84	3.04
Pacific	2.56	2.44	2.67	3.01	2.71
U.S. Total	2.68	2.74	2.71	2.96	2.74
Black duck					
Atlantic	1.04	1.01	1.09	1.05	1.18
Mississippi	1.15	0.71	0.62	1.17	0.77
U.S. Total	1.05	0.93	0.97	1.06	1.09
Mottled duck					
Atlantic	1.32	0.70	1.18	0.91	0.90
Mississippi	0.90	1.25	0.56	1.41	0.97
Central	---	1.64	0.87	1.42	---
U.S. Total	1.10	1.04	0.81	1.10	0.83
Gadwall					
Atlantic	2.31	2.30	1.91	2.38	1.05
Mississippi	1.70	1.81	2.09	2.17	1.85
Central	1.73	1.65	1.82	2.09	1.75
Pacific	1.67	1.70	1.92	2.43	1.80
U.S. Total	1.74	1.76	1.95	2.19	1.74
American wigeon					
Atlantic	1.71	2.58	1.92	1.45	1.44
Mississippi	1.36	1.24	1.47	1.24	1.47
Central	1.80	1.82	1.73	1.74	1.47
Pacific	1.54	1.55	1.66	1.66	1.46
U.S. Total	1.56	1.57	1.65	1.59	1.45
Green-winged teal					
Atlantic	1.27	1.21	1.54	1.37	1.38
Mississippi	1.89	1.88	1.93	2.11	1.82
Central	1.72	1.87	1.95	1.74	1.62
Pacific	1.82	1.91	1.70	1.56	1.42
U.S. Total	1.76	1.83	1.82	1.76	1.62
Blue-winged/Cinnamon teal					
Atlantic	1.40	1.31	1.53	1.07	1.28
Mississippi	1.30	1.40	1.41	1.24	1.39
Central	1.55	1.37	1.51	1.30	1.68
Pacific	0.97	1.41	1.64	1.36	1.09
U.S. Total	1.39	1.38	1.46	1.25	1.48

Table 11 (continued). Preliminary weighted sex ratios of ducks harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Males per female [a]				
Species and Flyway	2018	2019	2020	2021	2022
Northern shoveler					
Atlantic	1.33	1.40	1.82	2.16	1.38
Mississippi	1.92	1.68	1.83	1.70	1.47
Central	1.37	1.31	1.42	1.65	1.29
Pacific	1.76	1.79	1.64	1.72	1.64
U.S. Total	1.69	1.58	1.63	1.71	1.50
Northern pintail					
Atlantic	2.43	2.18	1.70	1.46	2.05
Mississippi	2.40	2.50	2.16	1.81	2.17
Central	2.08	2.05	2.20	2.00	2.12
Pacific	3.06	3.28	3.28	2.74	2.62
U.S. Total	2.66	2.67	2.52	2.12	2.26
Wood duck					
Atlantic	1.95	2.11	2.14	2.26	2.14
Mississippi	2.02	2.00	1.92	2.05	2.04
Central	2.62	2.38	2.29	1.87	3.69
Pacific	1.49	2.41	2.10	1.81	2.23
U.S. Total	2.01	2.08	2.03	2.10	2.16
Redhead					
Atlantic	1.58	1.42	1.12	2.10	1.76
Mississippi	1.85	1.37	1.37	1.85	2.00
Central	1.43	1.60	1.36	1.39	1.32
Pacific	1.72	1.45	1.40	2.01	1.66
U.S. Total	1.62	1.50	1.35	1.73	1.53
Canvasback					
Atlantic	1.44	---	1.08	1.62	1.45
Mississippi	2.09	1.66	1.15	1.24	1.51
Central	1.33	1.25	1.30	0.56	1.32
Pacific	1.18	1.63	1.07	1.27	1.23
U.S. Total	1.52	1.50	1.15	1.10	1.38
Greater scaup					
Atlantic	1.18	1.24	1.07	1.31	1.90
Mississippi	1.42	1.26	2.79	1.12	1.06
Central	---	2.00	---	---	---
Pacific	2.28	1.43	1.19	1.35	1.68
U.S. Total	1.40	1.31	1.57	1.24	1.44

Table 11 (continued). Preliminary weighted sex ratios of ducks harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Males per female [a]				
Species and Flyway	2018	2019	2020	2021	2022
Lesser scaup					
Atlantic	4.43	2.00	2.83	2.54	2.15
Mississippi	2.28	1.78	2.25	1.56	1.97
Central	1.74	2.37	1.85	1.62	1.20
Pacific	1.49	1.15	1.09	1.26	1.84
U.S. Total	2.31	1.86	1.99	1.60	1.79
Ring-necked duck					
Atlantic	1.76	1.47	1.47	1.21	1.48
Mississippi	1.70	2.00	2.05	1.88	1.88
Central	1.62	2.24	2.21	2.34	2.20
Pacific	1.27	2.20	1.49	1.93	2.29
U.S. Total	1.64	1.95	1.86	1.76	1.88
Common goldeneye					
Atlantic	0.82	1.52	0.98	1.46	1.32
Mississippi	1.46	1.41	1.36	1.87	1.20
Central	1.88	0.90	1.67	1.64	2.10
Pacific	1.24	2.01	2.40	1.39	2.46
U.S. Total	1.34	1.57	1.74	1.62	1.85
Bufflehead					
Atlantic	1.38	1.81	1.95	1.92	1.39
Mississippi	1.26	1.23	1.65	1.20	1.35
Central	1.61	1.47	1.68	1.33	1.43
Pacific	1.27	1.33	1.66	1.20	1.60
U.S. Total	1.34	1.46	1.74	1.40	1.43
Hooded merganser					
Atlantic	1.54	2.46	2.57	2.23	3.26
Mississippi	1.81	2.21	2.11	2.14	2.08
Central	2.24	---	7.89	6.92	---
Pacific	1.48	3.16	2.15	---	3.25
U.S. Total	1.72	2.37	2.52	2.34	2.46
Common merganser					
Atlantic	1.23	0.75	0.58	0.81	0.93
Mississippi	---	0.78	0.99	---	---
Central	---	---	---	---	0.94
Pacific	1.16	0.84	1.03	1.12	0.69
U.S. Total	1.04	0.78	0.69	0.97	0.70

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

Table 12. Preliminary weighted age ratios of geese harvested during the 2018-2022 hunting seasons, by species and flyway, from the Waterfowl Parts Collection Survey.

	Immatures per adult [a, b]				
Species and Flyway	2018	2019	2020	2021	2022
Canada goose					
Atlantic	0.24	0.41	0.48	0.40	0.36
Mississippi	0.32	0.36	0.37	0.36	0.33
Central	0.28	0.35	0.46	0.41	0.25
Pacific	0.39	0.35	0.36	0.28	0.24
U.S. Total	0.30	0.37	0.41	0.37	0.30
Cackling Goose [c]					
Atlantic	---	---	---	---	---
Mississippi	---	---	---	4.44	---
Central	---	---	---	0.59	0.40
Pacific	---	---	---	0.56	0.61
U.S. Total	---	---	---	0.63	0.48
Snow goose					
Atlantic	0.05	0.50	0.55	0.30	0.03
Mississippi	0.19	0.46	0.17	0.55	1.30
Central	0.08	0.36	0.23	0.27	0.54
Pacific	0.39	0.87	0.54	0.61	0.71
U.S. Total	0.22	0.56	0.35	0.46	0.66
Blue goose					
Atlantic	---	1.59	---	---	---
Mississippi	0.23	0.20	0.30	0.22	1.01
Central	0.06	0.82	0.44	0.45	0.81
U.S. Total	0.13	0.65	0.39	0.33	0.89
Ross' goose					
Mississippi	---	1.25	---	0.95	---
Central	0.11	0.97	0.53	0.77	1.54
Pacific	0.29	0.71	1.78	1.51	2.33
U.S. Total	0.16	0.92	0.88	1.06	2.36
Greater white-fronted goose					
Mississippi	0.24	0.63	0.44	0.57	0.45
Central	0.29	0.56	0.46	0.37	0.35
Pacific	0.44	0.55	0.56	0.50	0.36
U.S. Total	0.31	0.60	0.49	0.52	0.41
Brant					
Atlantic	0.02	0.20	0.26	0.14	0.08
Pacific	1.12	---	0.91	0.30	---
U.S. Total	0.07	0.29	0.33	0.32	0.16

[a] Ratio not shown if based on a sample of less than 20 wings.

[b] In estimating Flyway and U.S. ratios, the ratio for each state was weighed in proportion to the estimated harvest in that state as determined from the Harvest Information Program Waterfowl Harvest Survey.

[c] Cackling geese were not identified to species in the Parts Collection Survey operationally prior to 2021.

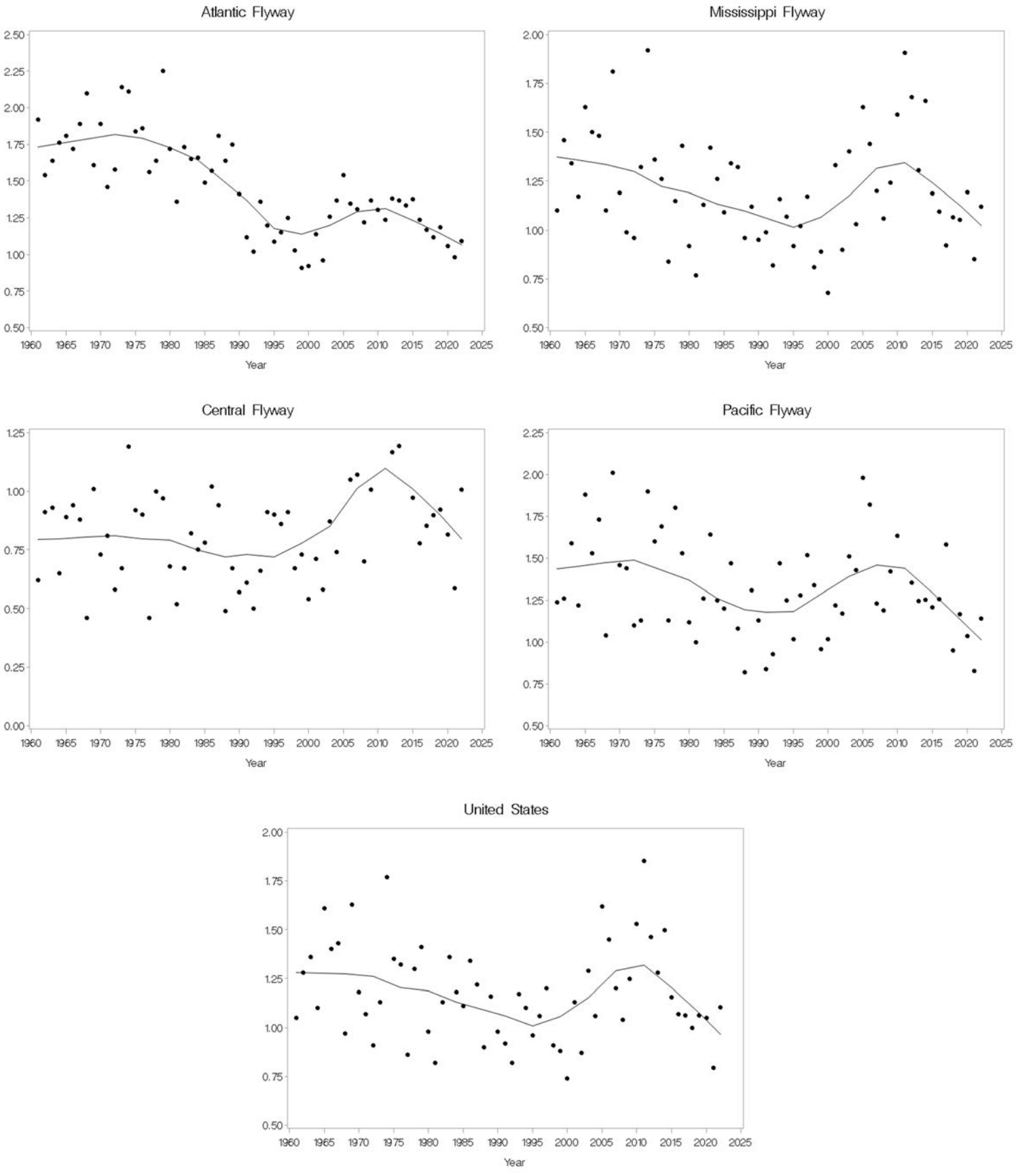

Figure 3. Age ratios of mallard harvested in the United States, 1961-2022.

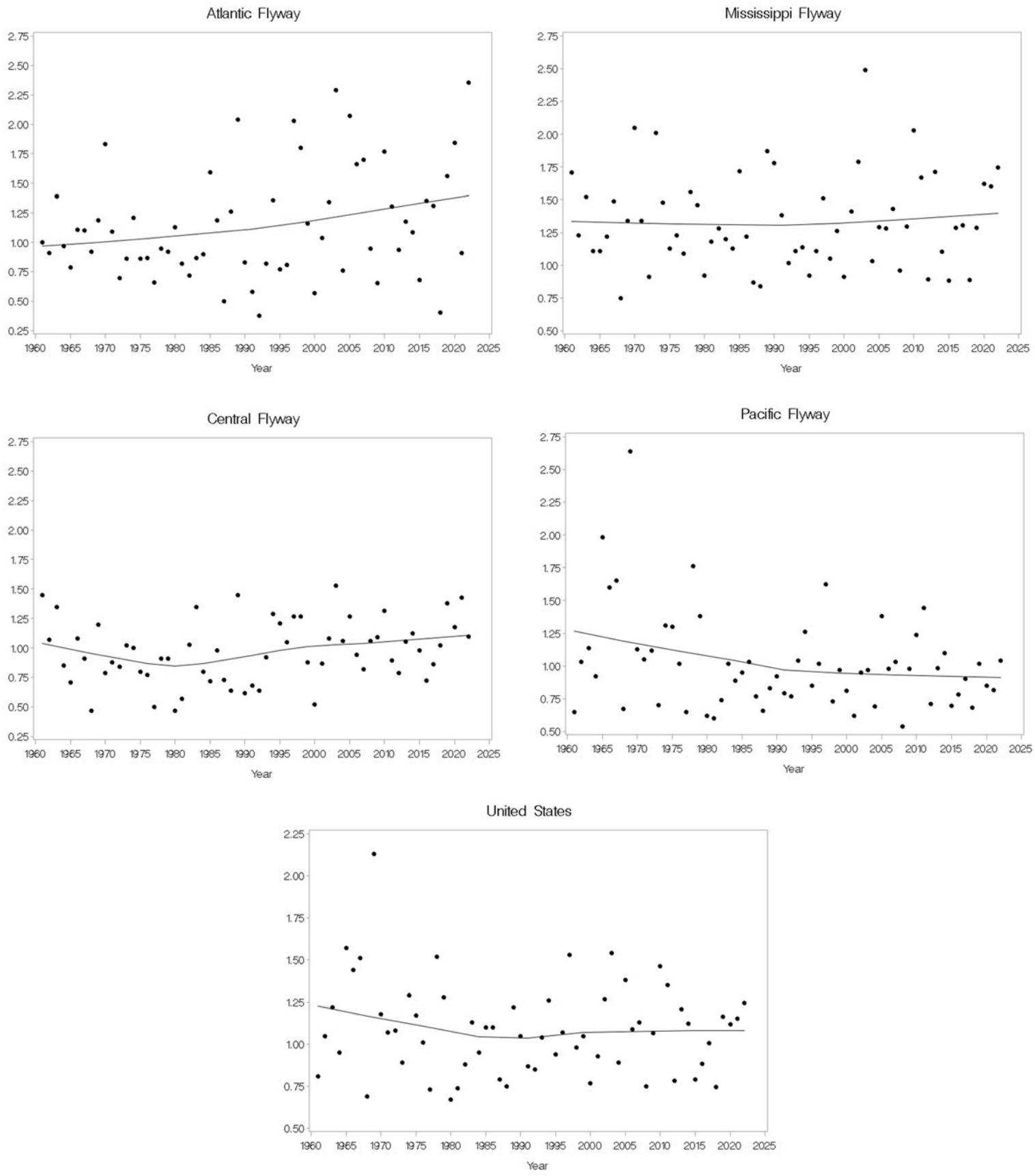

Figure 4. Age ratios of northern pintails harvested in the United States, 1961-2022.

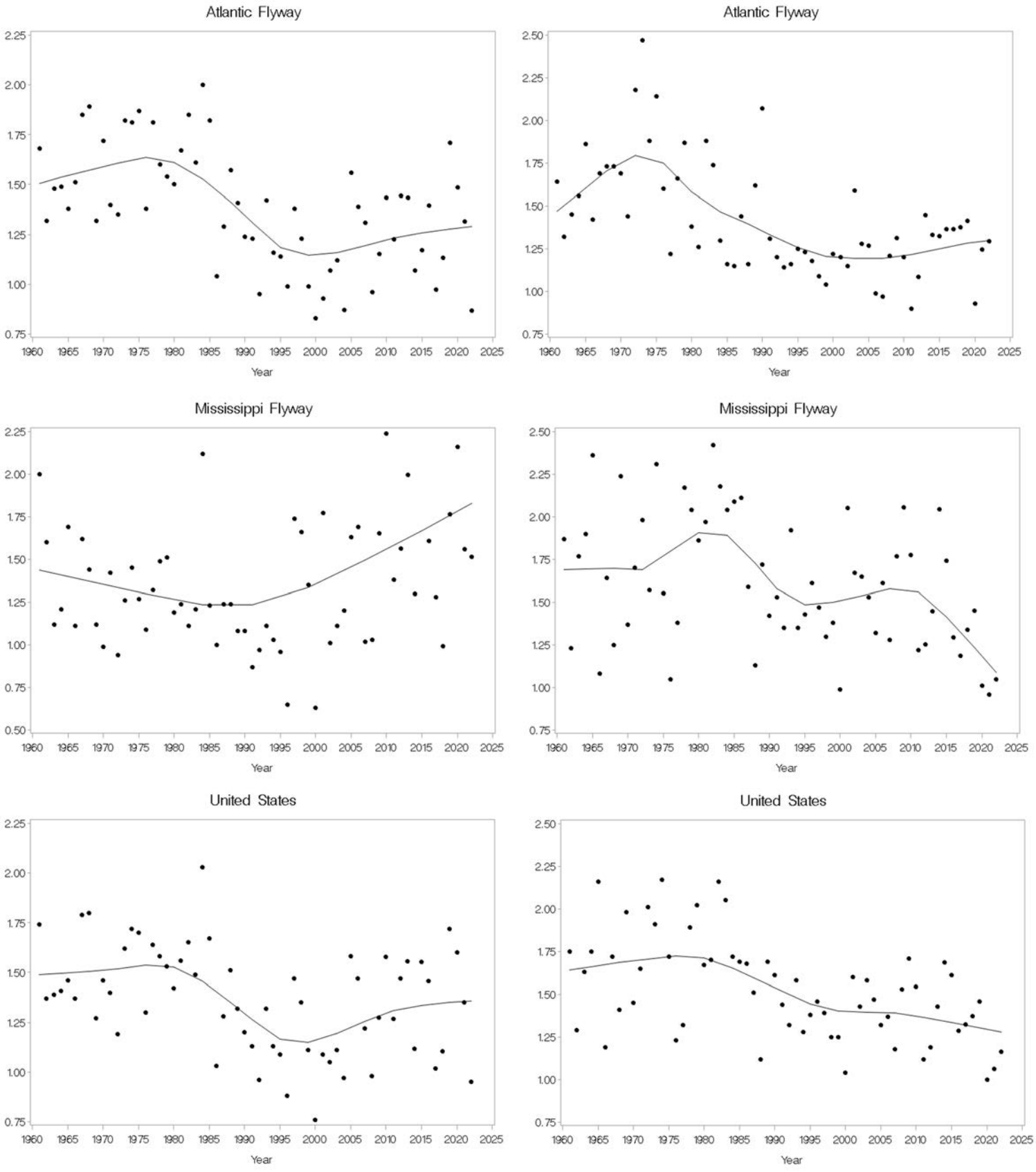

Figure 5. Age ratios of American black ducks (left column) and wood ducks (right column) harvested in the United States, 1961-2022.

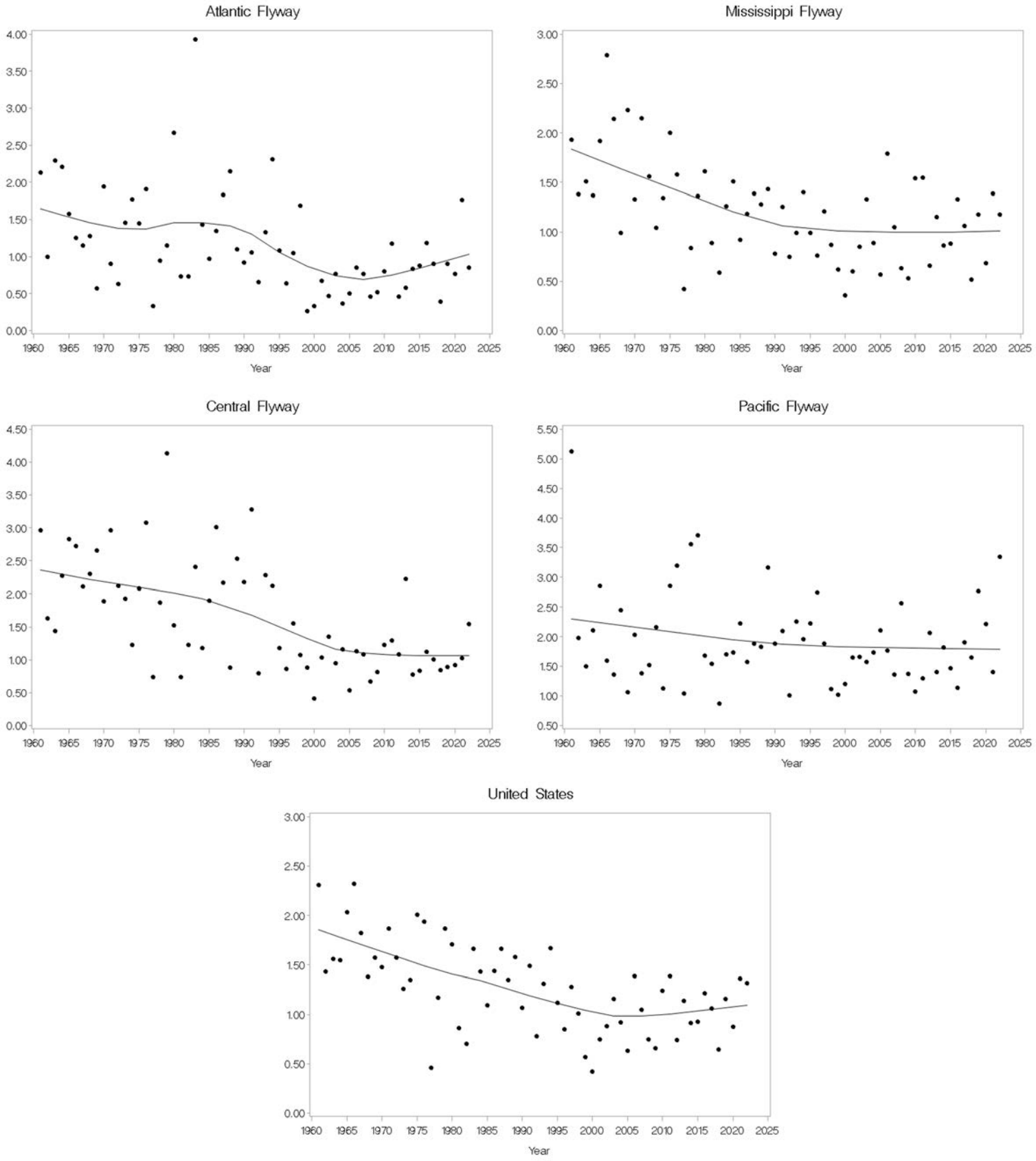

Figure 6. Age ratios of lesser scaup harvested in the United States, 1961-2022.

Table 13. Preliminary estimates of mourning dove harvest and hunter activity during the 2021 and 2022 hunting seasons.[a]

	Mourning Dove Harvest		Active Hunters [b]		Mourning Dove Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Alabama	456,200 ± 26%	371,700 ± 24%	32,500 ± 19%	30,400 ± 15%	65,800 ± 21%	54,500 ± 21%	14.0 ± 33%	12.2 ± 28%
Delaware	21,500 ± 42%	19,600 ± 135%	1,600 ± 29%	2,000 ± 0%	4,500 ± 42%	2,800 ± 41%	13.2 ± 51%	9.6 ± 135%
Florida	110,200 ± 49%	84,700 ± 49%	7,200 ± 43%	8,900 ± 35%	21,200 ± 40%	14,500 ± 45%	15.2 ± 66%	9.5 ± 60%
Georgia	620,300 ± 19%	423,200 ± 22%	37,000 ± 16%	40,300 ± 13%	84,600 ± 16%	67,000 ± 19%	16.8 ± 25%	10.5 ± 26%
Illinois	150,600 ± 33%	117,900 ± 33%	11,800 ± 28%	10,800 ± 21%	23,800 ± 27%	21,500 ± 38%	12.8 ± 43%	11.0 ± 39%
Indiana	176,000 ± 34%	91,300 ± 38%	9,000 ± 31%	8,600 ± 25%	29,100 ± 34%	17,700 ± 35%	19.7 ± 46%	10.6 ± 46%
Kentucky	376,100 ± 22%	216,900 ± 28%	12,100 ± 8%	14,900 ± 15%	41,800 ± 19%	31,100 ± 24%	31.0 ± 23%	14.6 ± 32%
Louisiana	110,300 ± 34%	124,000 ± 54%	7,500 ± 23%	8,100 ± 32%	19,200 ± 29%	14,800 ± 47%	14.7 ± 41%	15.3 ± 63%
Maryland	89,200 ± 35%	48,500 ± 57%	6,000 ± 34%	5,800 ± 44%	13,000 ± 35%	10,400 ± 57%	14.9 ± 48%	8.3 ± 72%
Mississippi	130,400 ± 35%	104,000 ± 34%	10,900 ± 26%	10,300 ± 27%	19,900 ± 29%	14,500 ± 32%	12.0 ± 43%	10.1 ± 44%
North Carolina	549,300 ± 22%	388,300 ± 23%	37,100 ± 21%	39,800 ± 14%	81,400 ± 20%	76,600 ± 20%	14.8 ± 30%	9.8 ± 27%
Ohio	154,500 ± 35%	175,200 ± 34%	12,800 ± 31%	11,100 ± 19%	32,400 ± 36%	33,100 ± 36%	12.0 ± 47%	15.8 ± 39%
Pennsylvania	54,500 ± 47%	124,700 ± 36%	9,200 ± 60%	14,900 ± 21%	38,100 ± 94%	32,200 ± 29%	5.9 ± 76%	8.4 ± 42%
South Carolina	347,600 ± 35%	466,100 ± 33%	20,900 ± 32%	22,800 ± 20%	50,100 ± 36%	58,800 ± 28%	16.6 ± 48%	20.5 ± 38%
Tennessee	204,400 ± 52%	307,000 ± 31%	18,400 ± 39%	21,700 ± 17%	36,700 ± 42%	47,500 ± 26%	11.1 ± 65%	14.2 ± 35%
Virginia	208,000 ± 18%	174,000 ± 40%	15,900 ± 22%	13,300 ± 22%	37,000 ± 21%	28,700 ± 32%	13.1 ± 28%	13.1 ± 46%
West Virginia	10,400 ± 32%	5,800 ± 86%	1,000 ± 25%	1,500 ± 37%	2,700 ± 32%	2,000 ± 56%	10.6 ± 41%	3.8 ± 94%
Wisconsin	51,500 ± 39%	25,400 ± 60%	5,800 ± 43%	7,500 ± 29%	21,500 ± 41%	17,000 ± 43%	8.9 ± 58%	3.4 ± 67%
Eastern Unit Total	3,822,100 ± 8%	3,268,500 ± 9%	256,800	272,600	624,300 ± 9%	544,600 ± 7%		
Arkansas	181,300 ± 32%	123,500 ± 38%	15,500 ± 26%	10,000 ± 29%	31,200 ± 29%	20,400 ± 42%	11.7 ± 41%	12.4 ± 48%
Colorado	122,900 ± 22%	112,700 ± 22%	9,800 ± 16%	8,700 ± 15%	25,700 ± 23%	17,800 ± 18%	12.6 ± 27%	13.0 ± 27%
Iowa	61,400 ± 32%	58,300 ± 36%	7,500 ± 25%	6,300 ± 23%	20,900 ± 38%	9,300 ± 30%	8.2 ± 40%	9.2 ± 43%
Kansas	400,200 ± 22%	375,600 ± 23%	25,500 ± 19%	22,000 ± 14%	64,600 ± 21%	57,000 ± 25%	15.7 ± 29%	17.1 ± 27%
Minnesota	22,600 ± 57%	65,800 ± 55%	4,200 ± 92%	7,200 ± 34%	9,700 ± 57%	14,800 ± 40%	5.4 ± 108%	9.1 ± 65%
Missouri	259,700 ± 30%	182,600 ± 33%	19,800 ± 20%	15,600 ± 20%	51,300 ± 24%	34,900 ± 29%	13.1 ± 36%	11.7 ± 39%
Montana	18,400 ± 47%	17,900 ± 73%	2,100 ± 41%	1,600 ± 70%	4,700 ± 48%	4,000 ± 97%	8.8 ± 62%	11.5 ± 101%
Nebraska	148,000 ± 21%	131,000 ± 42%	10,400 ± 21%	10,000 ± 23%	27,000 ± 22%	24,500 ± 33%	14.3 ± 30%	13.1 ± 48%
New Mexico	151,800 ± 34%	77,800 ± 27%	11,500 ± 24%	5,300 ± 15%	33,700 ± 29%	14,400 ± 20%	13.2 ± 42%	14.6 ± 31%
North Dakota	91,500 ± 34%	33,600 ± 90%	5,500 ± 31%	2,700 ± 53%	20,100 ± 33%	4,900 ± 59%	16.5 ± 46%	12.7 ± 104%

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 13 (continued). Preliminary estimates of mourning dove harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Mourning Dove Harvest		Active Hunters [b]		Mourning Dove Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Oklahoma	212,900 ± 33%	149,600 ± 50%	14,800 ± 27%	14,200 ± 25%	38,100 ± 25%	30,500 ± 42%	14.4 ± 43%	10.5 ± 56%
South Dakota	88,200 ± 38%	50,500 ± 69%	5,400 ± 32%	4,000 ± 38%	12,300 ± 28%	9,600 ± 53%	16.2 ± 49%	12.7 ± 79%
Texas	2,467,700 ± 17%	2,640,600 ± 17%	170,300 ± 15%	172,200 ± 7%	532,500 ± 18%	412,800 ± 12%	14.5 ± 23%	15.3 ± 18%
Wyoming	10,000 ± 51%	19,200 ± 82%	1,200 ± 41%	1,400 ± 38%	2,900 ± 55%	4,400 ± 71%	8.1 ± 65%	13.5 ± 91%
Central Unit Total	4,236,600 ± 11%	4,038,600 ± 12%	303,500	281,100	874,700 ± 11%	659,200 ± 9%		
Arizona	308,600 ± 15%	308,700 ± 16%	17,900 ± 9%	18,900 ± 8%	50,500 ± 12%	47,000 ± 12%	17.2 ± 18%	16.4 ± 18%
California	660,400 ± 19%	464,900 ± 19%	42,400 ± 15%	32,600 ± 10%	108,500 ± 21%	64,500 ± 15%	15.6 ± 25%	14.2 ± 22%
Idaho	83,000 ± 50%	97,500 ± 58%	8,600 ± 36%	6,800 ± 30%	17,600 ± 40%	22,000 ± 44%	9.7 ± 62%	14.3 ± 65%
Nevada	19,600 ± 51%	14,400 ± 43%	1,900 ± 40%	2,300 ± 42%	4,300 ± 37%	3,200 ± 45%	10.3 ± 65%	6.3 ± 60%
Oregon	20,300 ± 66%	15,800 ± 61%	3,400 ± 40%	3,000 ± 32%	11,200 ± 45%	5,700 ± 37%	6.0 ± 77%	5.2 ± 69%
Utah	20,300 ± 46%	12,700 ± 70%	4,900 ± 34%	3,100 ± 33%	9,300 ± 38%	5,300 ± 41%	4.2 ± 57%	4.1 ± 78%
Washington	31,100 ± 32%	33,500 ± 40%	3,400 ± 26%	4,500 ± 26%	9,700 ± 37%	10,600 ± 41%	9.1 ± 41%	7.5 ± 48%
Western Unit Total	1,143,300 ± 12%	947,500 ± 12%	82,500	71,200	211,000 ± 12%	158,200 ± 10%		
United States Total	9,202,100 ± 6%	8,254,600 ± 7%	642,800	625,000	1,710,000 ± 7%	1,362,000 ± 5%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 14. Preliminary estimates of white-winged dove harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	White-winged Dove Harvest		Active Hunters [b]		White-winged Dove Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Alabama	0	11,600 ± 121%	600 ± 196%	3,400 ± 58%	1,300 ± 196%	4,300 ± 62%	0	3.4 ± 134%
Delaware	0	0	0	0	0	0	0	0
Florida	4,900 ± 117%	6,500 ± 108%	700 ± 86%	3,100 ± 69%	2,100 ± 91%	4,000 ± 75%	7.1 ± 146%	2.1 ± 128%
Georgia	0	7,800 ± 158%	1,800 ± 107%	2,500 ± 79%	2,300 ± 103%	4,300 ± 95%	0	3.1 ± 177%
Louisiana	3,700 ± 88%	3,900 ± 170%	600 ± 86%	900 ± 98%	2,600 ± 102%	1,200 ± 102%	6.4 ± 123%	4.1 ± 197%
Maryland	0	0	0	0	0	0	0	0
Mississippi	900 ± 167%	2,800 ± 143%	800 ± 131%	1,600 ± 98%	1,200 ± 119%	2,100 ± 112%	1.2 ± 213%	1.8 ± 173%
North Carolina	100 ± 195%	10,900 ± 92%	300 ± 141%	4,400 ± 52%	1,300 ± 167%	7,100 ± 58%	0.4 ± 241%	2.5 ± 105%
Pennsylvania	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0	0
Virginia	0	0	0	0	0	0	0	0
Eastern Unit Total	9,600 ± 70%	43,400 ± 54%	4,800	15,900	10,700 ± 50%	22,800 ± 33%		
Colorado	500 ± 135%	2,800 ± 88%	1,000 ± 61%	1,300 ± 51%	1,900 ± 65%	2,400 ± 62%	0.5 ± 149%	2.1 ± 102%
Kansas	1,300 ± 102%	11,200 ± 63%	1,100 ± 88%	4,500 ± 42%	2,400 ± 93%	9,200 ± 55%	1.2 ± 135%	2.5 ± 76%
New Mexico	63,100 ± 66%	27,800 ± 34%	7,000 ± 34%	3,500 ± 19%	23,600 ± 46%	10,600 ± 24%	9.0 ± 75%	7.9 ± 39%
Oklahoma	4,000 ± 124%	4,900 ± 157%	2,300 ± 84%	3,900 ± 64%	6,600 ± 63%	7,200 ± 71%	1.7 ± 150%	1.3 ± 169%
Texas	1,267,500 ± 37%	772,000 ± 20%	96,400 ± 22%	99,900 ± 10%	333,500 ± 29%	204,600 ± 16%	13.1 ± 44%	7.7 ± 23%
Central Unit Total	1,336,400 ± 36%	818,700 ± 19%	107,800	113,200	368,000 ± 26%	234,100 ± 14%		
Arizona	51,400 ± 22%	44,600 ± 22%	10,300 ± 14%	11,400 ± 12%	25,700 ± 17%	27,900 ± 18%	5.0 ± 26%	3.9 ± 26%
California	32,500 ± 53%	38,700 ± 40%	9,900 ± 36%	8,000 ± 26%	23,100 ± 40%	14,300 ± 32%	3.3 ± 64%	4.9 ± 47%
Nevada	0	300 ± 195%	200 ± 161%	300 ± 137%	400 ± 176%	300 ± 137%	0	1.0 ± 239%
Utah	0	0	700 ± 107%	700 ± 77%	1,900 ± 126%	1,400 ± 94%	0	0
Western Unit Total	83,900 ± 25%	83,600 ± 22%	21,100	20,400	51,000 ± 21%	43,900 ± 16%		
United States Total	1,429,900 ± 33%	945,800 ± 17%	133,700	149,500	429,800 ± 23%	300,800 ± 11%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 15. Preliminary estimates of band-tailed pigeon harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Band-tailed Pigeon Harvest		Active Hunters [b]		Band-tailed Pigeon Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Arizona	100 ± 150%	300 ± 56%	300 ± 139%	500 ± 27%	1,000 ± 135%	800 ± 32%	0.4 ± 205%	0.7 ± 63%
Colorado	<50 ± 115%	<50 ± 114%	100 ± 34%	100 ± 58%	100 ± 44%	100 ± 65%	0.6 ± 120%	0.9 ± 128%
New Mexico	100 ± 58%	200 ± 117%	100 ± 34%	200 ± 37%	300 ± 54%	400 ± 54%	1.0 ± 68%	1.2 ± 123%
Utah	<50 ± 97%	0	<50 ± 44%	100 ± 62%	100 ± 60%	200 ± 91%	0.5 ± 107%	0
Interior Total	300 ± 68%	600 ± 55%	500	800	1,500 ± 92%	1,400 ± 26%		
California	3,500 ± 105%	1,800 ± 25%	2,200 ± 71%	600 ± 17%	4,400 ± 64%	1,200 ± 23%	1.6 ± 127%	3.0 ± 30%
Oregon	1,900 ± 36%	900 ± 36%	500 ± 16%	400 ± 18%	1,500 ± 26%	900 ± 26%	3.8 ± 40%	2.4 ± 40%
Washington	200 ± 70%	200 ± 89%	100 ± 36%	100 ± 38%	300 ± 42%	200 ± 47%	1.7 ± 79%	1.2 ± 96%
Pacific Coast Total	5,600 ± 67%	2,900 ± 20%	2,800	1,100	6,300 ± 46%	2,300 ± 16%		
United States Total	5,900 ± 64%	3,500 ± 19%	3,400	1,900	7,800 ± 41%	3,700 ± 14%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 16. Preliminary estimates of American woodcock harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Woodcock Harvest		Active Woodcock Hunters [b]		Woodcock Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Connecticut	500 ± 64%	400 ± 73%	500 ± 60%	200 ± 25%	2,700 ± 53%	800 ± 46%	1.0 ± 88%	2.7 ± 77%
Delaware	300 ± 159%	300 ± 104%	300 ± 121%	100 ± 40%	1,600 ± 161%	200 ± 66%	0.9 ± 200%	4.7 ± 112%
Florida	0	7,500 ± 183%	0	4,800 ± 134%	0	7,600 ± 133%	0	1.6 ± 227%
Georgia	2,100 ± 164%	1,000 ± 43%	2,400 ± 144%	400 ± 30%	9,900 ± 140%	1,600 ± 42%	0.9 ± 218%	2.5 ± 52%
Maine	19,600 ± 91%	20,400 ± 77%	6,900 ± 40%	6,800 ± 89%	35,600 ± 48%	17,600 ± 56%	2.8 ± 99%	3.0 ± 117%
Maryland	400 ± 56%	800 ± 53%	100 ± 52%	300 ± 34%	400 ± 62%	1,000 ± 48%	4.2 ± 76%	2.8 ± 62%
Massachusetts	1,100 ± 80%	2,800 ± 86%	800 ± 58%	600 ± 17%	3,000 ± 48%	3,700 ± 49%	1.5 ± 98%	4.4 ± 88%
New Hampshire	5,900 ± 81%	5,000 ± 32%	2,600 ± 47%	2,100 ± 97%	16,000 ± 56%	8,100 ± 75%	2.3 ± 94%	2.4 ± 102%
New Jersey	1,700 ± 74%	600 ± 42%	1,300 ± 66%	200 ± 19%	5,000 ± 76%	1,400 ± 57%	1.4 ± 99%	2.7 ± 46%
New York	13,000 ± 104%	4,300 ± 77%	2,900 ± 47%	5,700 ± 92%	20,800 ± 66%	13,500 ± 97%	4.5 ± 114%	0.8 ± 120%
North Carolina	9,900 ± 117%	9,900 ± 52%	5,200 ± 100%	6,900 ± 104%	12,600 ± 83%	19,100 ± 64%	1.9 ± 154%	1.4 ± 116%
Pennsylvania	6,300 ± 73%	1,900 ± 24%	4,600 ± 62%	3,400 ± 94%	30,300 ± 92%	7,900 ± 64%	1.4 ± 96%	0.6 ± 97%
Rhode Island	100 ± 90%	100 ± 81%	300 ± 87%	100 ± 55%	500 ± 52%	200 ± 71%	0.5 ± 125%	2.2 ± 98%
South Carolina	6,100 ± 155%	5,500 ± 133%	3,400 ± 131%	3,900 ± 183%	4,300 ± 105%	5,100 ± 141%	1.8 ± 202%	1.4 ± 226%
Vermont	2,600 ± 77%	1,900 ± 30%	1,900 ± 51%	500 ± 9%	7,500 ± 55%	2,300 ± 24%	1.4 ± 92%	3.7 ± 31%
Virginia	3,300 ± 56%	2,700 ± 39%	500 ± 22%	500 ± 16%	2,900 ± 40%	3,300 ± 30%	6.5 ± 60%	4.9 ± 43%
West Virginia	500 ± 43%	300 ± 63%	100 ± 16%	100 ± 23%	700 ± 32%	400 ± 56%	3.8 ± 46%	2.6 ± 67%
Eastern Region Total	73,500 ± 38%	65,400 ± 35%	33,800	36,500	153,600 ± 27%	94,000 ± 27%		
Alabama	3,400 ± 169%	500 ± 126%	1,500 ± 184%	100 ± 69%	7,900 ± 179%	400 ± 86%	2.2 ± 249%	3.8 ± 144%
Arkansas	3,100 ± 195%	2,400 ± 134%	100 ± 195%	1,800 ± 177%	1,800 ± 195%	2,200 ± 143%	21.0 ± 276%	1.4 ± 222%
Illinois	200 ± 195%	100 ± 111%	1,500 ± 185%	1,800 ± 182%	1,500 ± 177%	2,300 ± 149%	0.2 ± 269%	< 0.1 ± 213%
Indiana	1,700 ± 82%	300 ± 57%	800 ± 109%	1,100 ± 171%	2,100 ± 70%	1,400 ± 131%	2.1 ± 136%	0.3 ± 181%
Iowa	4,100 ± 136%	100 ± 76%	1,700 ± 129%	100 ± 36%	4,100 ± 153%	400 ± 73%	2.4 ± 188%	0.7 ± 84%
Kansas	<50 ± 188%	100 ± 139%	<50 ± 188%	100 ± 89%	<50 ± 188%	100 ± 95%	3.0 ± 265%	0.8 ± 165%
Kentucky	300 ± 108%	400 ± 84%	100 ± 53%	1,500 ± 177%	400 ± 68%	6,100 ± 176%	2.3 ± 120%	0.2 ± 196%
Louisiana	4,900 ± 98%	9,200 ± 113%	4,700 ± 76%	2,300 ± 148%	12,700 ± 86%	8,200 ± 127%	1.0 ± 124%	4.0 ± 187%
Michigan	47,500 ± 25%	32,100 ± 9%	20,100 ± 24%	23,700 ± 46%	93,700 ± 23%	55,800 ± 31%	2.4 ± 34%	1.4 ± 47%
Minnesota	26,300 ± 49%	23,300 ± 25%	11,000 ± 41%	14,100 ± 56%	47,800 ± 44%	54,700 ± 69%	2.4 ± 64%	1.7 ± 62%
Mississippi	400 ± 159%	1,400 ± 122%	1,100 ± 185%	200 ± 42%	3,500 ± 176%	900 ± 75%	0.3 ± 244%	6.5 ± 129%

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 16 (continued). Preliminary estimates of American woodcock harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Woodcock Harvest		Active Woodcock Hunters [b]		Woodcock Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Missouri	4,100 ± 147%	3,800 ± 164%	3,200 ± 105%	1,700 ± 180%	12,900 ± 141%	2,500 ± 125%	1.3 ± 181%	2.2 ± 243%
Nebraska	0	0	0	0	0	0	0	0
Ohio	1,400 ± 88%	2,100 ± 117%	1,500 ± 145%	1,700 ± 139%	9,300 ± 138%	3,100 ± 81%	0.9 ± 169%	1.2 ± 182%
Oklahoma	100 ± 193%	0	100 ± 104%	0	200 ± 123%	0	0.7 ± 219%	0
Tennessee	100 ± 141%	200 ± 80%	100 ± 105%	200 ± 39%	400 ± 122%	700 ± 59%	1.0 ± 176%	1.1 ± 89%
Texas	1,600 ± 108%	3,900 ± 116%	300 ± 41%	4,800 ± 132%	2,100 ± 103%	5,700 ± 110%	5.1 ± 116%	0.8 ± 176%
Wisconsin	42,400 ± 56%	32,600 ± 18%	12,900 ± 33%	13,300 ± 47%	72,700 ± 42%	45,200 ± 44%	3.3 ± 65%	2.5 ± 50%
Central Region Total	141,300 ± 23%	112,500 ± 14%	60,700	68,600	273,100 ± 19%	189,600 ± 26%		
United States Total	214,800 ± 20%	177,900 ± 16%	94,500	105,100	426,700 ± 16%	283,600 ± 19%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 17. Preliminary estimates of snipe harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Snipe Harvest		Active Snipe Hunters [b]		Snipe Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Connecticut	0	<50 ± 187%	0	<50 ± 187%	0	<50 ± 187%	0	3.0 ± 264%
Delaware	0	0	0	0	0	0	0	0
Florida	29,300 ± 81%	23,300 ± 42%	1,700 ± 41%	1,600 ± 16%	10,700 ± 77%	6,200 ± 31%	16.8 ± 91%	14.9 ± 45%
Georgia	0	700 ± 115%	100 ± 195%	100 ± 75%	500 ± 195%	200 ± 88%	0	7.5 ± 138%
Maine	0	<50 ± 192%	100 ± 195%	100 ± 86%	300 ± 195%	200 ± 99%	0	0.2 ± 211%
Maryland	0	300 ± 149%	0	100 ± 109%	0	200 ± 130%	0	3.7 ± 184%
Massachusetts	600 ± 137%	0	300 ± 128%	<50 ± 193%	2,000 ± 130%	<50 ± 193%	1.9 ± 187%	0
New Hampshire	<50 ± 194%	2,400 ± 196%	<50 ± 194%	1,200 ± 194%	100 ± 194%	2,400 ± 195%	1.0 ± 274%	2.0 ± 276%
New Jersey	0	<50 ± 190%	100 ± 195%	100 ± 108%	300 ± 195%	100 ± 146%	0	0.7 ± 219%
New York	0	0	0	<50 ± 106%	0	200 ± 147%	0	0
North Carolina	0	23,600 ± 163%	1,700 ± 196%	400 ± 55%	1,700 ± 196%	3,800 ± 129%	0	59.7 ± 172%
Pennsylvania	0	<50 ± 185%	0	1,000 ± 194%	0	1,100 ± 186%	0	< 0.1 ± 268%
Rhode Island	0	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0	0
Vermont	<50 ± 184%	100 ± 145%	<50 ± 184%	100 ± 46%	<50 ± 184%	300 ± 59%	1.0 ± 260%	0.5 ± 152%
Virginia	<50 ± 188%	<50 ± 188%	<50 ± 105%	<50 ± 132%	<50 ± 105%	<50 ± 139%	0.3 ± 215%	2.0 ± 229%
West Virginia	400 ± 113%	<50 ± 180%	100 ± 107%	<50 ± 121%	1,400 ± 142%	100 ± 156%	3.3 ± 155%	1.0 ± 217%
Atlantic Flyway Total	30,300 ± 78%	50,500 ± 79%	4,300	4,800	17,100 ± 56%	14,800 ± 49%		
Alabama	0	400 ± 121%	0	100 ± 61%	0	600 ± 66%	0	2.8 ± 135%
Arkansas	2,900 ± 196%	400 ± 71%	200 ± 196%	200 ± 49%	600 ± 196%	400 ± 69%	14.0 ± 277%	2.5 ± 86%
Illinois	0	200 ± 103%	0	100 ± 59%	0	300 ± 96%	0	1.4 ± 119%
Indiana	200 ± 106%	100 ± 73%	100 ± 60%	100 ± 45%	200 ± 73%	200 ± 60%	3.0 ± 122%	1.2 ± 86%
Iowa	500 ± 121%	500 ± 72%	200 ± 69%	100 ± 37%	500 ± 75%	400 ± 47%	3.2 ± 140%	3.4 ± 81%
Kentucky	100 ± 195%	600 ± 118%	100 ± 119%	100 ± 87%	1,700 ± 151%	900 ± 118%	1.0 ± 228%	7.5 ± 147%
Louisiana	1,100 ± 195%	5,300 ± 52%	200 ± 195%	400 ± 33%	1,300 ± 195%	2,000 ± 47%	6.0 ± 276%	12.1 ± 62%
Michigan	0	4,400 ± 168%	2,400 ± 183%	1,600 ± 149%	2,500 ± 173%	2,200 ± 112%	0	2.7 ± 224%
Minnesota	0	700 ± 66%	200 ± 195%	4,500 ± 103%	400 ± 195%	6,400 ± 102%	0	0.2 ± 122%
Mississippi	0	1,100 ± 88%	0	200 ± 55%	0	500 ± 81%	0	6.7 ± 104%
Missouri	2,800 ± 166%	700 ± 82%	900 ± 172%	200 ± 36%	4,000 ± 185%	400 ± 42%	3.1 ± 239%	3.2 ± 90%

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 17 (continued). Preliminary estimates of snipe harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Snipe Harvest		Active Snipe Hunters [b]		Snipe Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Ohio	0	600 ± 102%	0	100 ± 55%	0	300 ± 74%	0	4.5 ± 116%
Tennessee	0	200 ± 142%	0	100 ± 74%	0	300 ± 94%	0	1.8 ± 160%
Wisconsin	300 ± 195%	500 ± 70%	300 ± 110%	300 ± 30%	1,500 ± 144%	1,000 ± 55%	1.0 ± 224%	1.7 ± 76%
Mississippi Flyway Total	7,900 ± 98%	15,600 ± 52%	4,400	8,200	12,900 ± 76%	15,800 ± 46%		
Colorado	0	400 ± 87%	100 ± 195%	900 ± 170%	100 ± 195%	3,500 ± 185%	0	0.5 ± 191%
Kansas	0	300 ± 102%	0	100 ± 54%	0	400 ± 82%	0	2.2 ± 115%
Nebraska	0	1,300 ± 101%	0	200 ± 38%	0	500 ± 53%	0	7.7 ± 108%
New Mexico	<50 ± 187%	<50 ± 187%	<50 ± 187%	<50 ± 187%	<50 ± 187%	<50 ± 187%	2.0 ± 264%	1.0 ± 264%
North Dakota	300 ± 84%	100 ± 72%	100 ± 53%	100 ± 55%	400 ± 74%	200 ± 76%	2.5 ± 99%	1.3 ± 91%
Oklahoma	400 ± 155%	200 ± 105%	100 ± 78%	100 ± 67%	300 ± 101%	200 ± 71%	3.0 ± 173%	1.5 ± 124%
South Dakota	600 ± 129%	200 ± 91%	900 ± 177%	100 ± 77%	1,800 ± 168%	100 ± 89%	0.8 ± 219%	3.2 ± 120%
Texas	1,400 ± 117%	14,600 ± 131%	400 ± 64%	3,600 ± 118%	800 ± 84%	5,300 ± 84%	3.7 ± 133%	4.0 ± 176%
Wyoming	200 ± 107%	<50 ± 156%	100 ± 136%	100 ± 57%	400 ± 87%	200 ± 69%	1.4 ± 173%	0.7 ± 166%
Central Flyway Total	2,900 ± 67%	17,100 ± 112%	1,700	5,200	3,900 ± 82%	10,300 ± 76%		
Arizona	0	100 ± 134%	100 ± 103%	<50 ± 106%	200 ± 113%	100 ± 140%	0	1.7 ± 171%
California	1,100 ± 70%	1,600 ± 63%	800 ± 117%	1,500 ± 154%	1,900 ± 107%	2,100 ± 112%	1.4 ± 137%	1.1 ± 167%
Idaho	0	0	0	100 ± %	0	100 ± 0%	0	0
Montana	400 ± 112%	4,300 ± 119%	100 ± 88%	2,100 ± 105%	200 ± 91%	3,700 ± 85%	3.0 ± 142%	2.0 ± 158%
Nevada	200 ± 139%	<50 ± 185%	300 ± 128%	<50 ± 89%	900 ± 154%	100 ± 95%	0.7 ± 189%	0.8 ± 205%
Oregon	1,800 ± 188%	500 ± 76%	500 ± 171%	200 ± 39%	1,800 ± 188%	600 ± 83%	3.6 ± 255%	3.1 ± 85%
Utah	600 ± 196%	200 ± 97%	300 ± 196%	100 ± 46%	300 ± 196%	300 ± 54%	2.0 ± 277%	1.3 ± 108%
Washington	0	100 ± 129%	0	100 ± 60%	0	1,000 ± 129%	0	1.0 ± 142%
Pacific Flyway Total	4,100 ± 89%	6,800 ± 77%	2,100	4,200	5,300 ± 79%	8,000 ± 53%		
Alaska	2,700 ± 183%	300 ± 113%	600 ± 155%	100 ± 72%	1,200 ± 164%	200 ± 96%	4.2 ± 240%	3.7 ± 134%
United States Total	47,900 ± 54%	90,400 ± 50%	13,200	22,500	40,300 ± 37%	49,100 ± 28%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 18. Preliminary estimates of coot harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Coot Harvest		Active Coot Hunters [b]		Coot Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Connecticut	100 ± 194%	0	100 ± 194%	0	100 ± 194%	0	1.0 ± 275%	0
Delaware	0	0	0	<50 ± 192%	0	<50 ± 192%	0	0
Florida	5,100 ± 177%	2,600 ± 67%	200 ± 136%	400 ± 37%	1,000 ± 136%	1,600 ± 68%	20.5 ± 223%	6.1 ± 77%
Georgia	200 ± 141%	100 ± 109%	200 ± 105%	100 ± 69%	700 ± 134%	100 ± 74%	1.0 ± 176%	1.4 ± 130%
Maine	0	100 ± 192%	0	<50 ± 192%	0	100 ± 192%	0	4.0 ± 272%
Maryland	0	0	0	0	0	0	0	0
Massachusetts	200 ± 195%	0	200 ± 195%	0	200 ± 195%	0	1.0 ± 276%	0
New Hampshire	0	0	0	0	0	0	0	0
New Jersey	200 ± 133%	<50 ± 190%	100 ± 160%	<50 ± 134%	600 ± 149%	<50 ± 134%	1.2 ± 208%	1.0 ± 232%
New York	700 ± 155%	200 ± 109%	400 ± 159%	100 ± 57%	500 ± 140%	200 ± 74%	1.8 ± 222%	2.0 ± 123%
North Carolina	0	19,900 ± 187%	0	400 ± 57%	0	2,800 ± 124%	0	54.9 ± 196%
Pennsylvania	0	<50 ± 106%	0	<50 ± 82%	0	300 ± 165%	0	0.6 ± 134%
Rhode Island	0	300 ± 192%	0	<50 ± 192%	0	<50 ± 192%	0	10.0 ± 272%
South Carolina	0	7,700 ± 196%	0	1,900 ± 196%	0	1,900 ± 196%	0	4.0 ± 277%
Vermont	<50 ± 0%	<50 ± 145%	<50 ± 0%	100 ± 74%	<50 ± 92%	100 ± 101%	2.0 ± 0%	0.7 ± 163%
Virginia	100 ± 138%	<50 ± 188%	300 ± 178%	<50 ± 132%	300 ± 178%	100 ± 171%	0.3 ± 225%	1.0 ± 229%
West Virginia	<50 ± 175%	100 ± 164%	<50 ± 156%	<50 ± 121%	100 ± 128%	100 ± 171%	0.7 ± 235%	6.0 ± 204%
Atlantic Flyway Total	6,600 ± 138%	31,100 ± 129%	1,600	3,200	3,500 ± 62%	7,600 ± 70%		
Alabama	0	600 ± 96%	0	200 ± 57%	0	600 ± 104%	0	3.7 ± 112%
Arkansas	6,500 ± 196%	4,100 ± 185%	200 ± 196%	2,700 ± 133%	1,300 ± 196%	3,000 ± 120%	31.0 ± 277%	1.5 ± 228%
Illinois	100 ± 137%	700 ± 95%	100 ± 137%	200 ± 42%	300 ± 153%	1,200 ± 71%	1.0 ± 194%	3.2 ± 104%
Indiana	200 ± 90%	800 ± 95%	<50 ± 65%	100 ± 43%	200 ± 87%	400 ± 76%	4.1 ± 111%	6.2 ± 104%
Iowa	2,700 ± 144%	1,200 ± 44%	1,100 ± 171%	300 ± 22%	1,300 ± 140%	700 ± 41%	2.5 ± 224%	4.0 ± 49%
Kentucky	700 ± 195%	0	100 ± 119%	900 ± 175%	4,800 ± 162%	1,200 ± 135%	5.0 ± 228%	0
Louisiana	22,500 ± 97%	16,000 ± 36%	1,100 ± 73%	1,200 ± 19%	3,700 ± 93%	4,100 ± 42%	20.5 ± 121%	13.5 ± 40%
Michigan	0	29,900 ± 189%	200 ± 195%	2,800 ± 125%	300 ± 195%	7,100 ± 142%	0	10.8 ± 226%
Minnesota	4,600 ± 196%	4,000 ± 60%	1,500 ± 196%	600 ± 27%	7,700 ± 196%	1,500 ± 41%	3.0 ± 277%	7.2 ± 66%
Mississippi	0	4,100 ± 125%	0	1,400 ± 173%	0	2,200 ± 120%	0	2.9 ± 213%
Missouri	800 ± 196%	<50 ± 188%	800 ± 196%	1,700 ± 190%	800 ± 196%	1,700 ± 189%	1.0 ± 277%	< 0.1 ± 267%

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 18 (continued). Preliminary estimates of coot harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Coot Harvest		Active Coot Hunters [b]		Coot Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Ohio	0	6,700 ± 127%	200 ± 129%	2,500 ± 130%	200 ± 129%	2,600 ± 126%	0	2.6 ± 182%
Tennessee	400 ± 195%	200 ± 174%	100 ± 195%	100 ± 74%	100 ± 195%	500 ± 90%	3.0 ± 276%	2.0 ± 189%
Wisconsin	2,000 ± 119%	8,000 ± 139%	400 ± 95%	1,400 ± 134%	1,600 ± 136%	2,900 ± 74%	5.5 ± 152%	5.8 ± 193%
Mississippi Flyway Total	40,400 ± 67%	76,300 ± 78%	5,800	15,900	22,200 ± 80%	29,700 ± 42%		
Colorado	1,800 ± 195%	300 ± 87%	100 ± 195%	1,000 ± 169%	500 ± 195%	3,500 ± 184%	22.0 ± 276%	0.3 ± 190%
Kansas	0	400 ± 85%	0	100 ± 67%	0	200 ± 76%	0	4.3 ± 108%
Nebraska	0	<50 ± 137%	0	<50 ± 105%	0	<50 ± 110%	0	1.0 ± 173%
New Mexico	<50 ± 139%	400 ± 113%	<50 ± 132%	100 ± 83%	100 ± 172%	400 ± 119%	1.5 ± 191%	6.8 ± 140%
North Dakota	100 ± 106%	6,100 ± 116%	100 ± 68%	2,600 ± 104%	300 ± 95%	3,700 ± 102%	1.9 ± 126%	2.4 ± 156%
Oklahoma	700 ± 93%	2,000 ± 115%	200 ± 60%	300 ± 43%	400 ± 84%	1,300 ± 104%	3.6 ± 110%	6.7 ± 123%
South Dakota	200 ± 176%	200 ± 149%	<50 ± 132%	<50 ± 129%	100 ± 149%	100 ± 166%	6.5 ± 220%	9.0 ± 198%
Texas	10,800 ± 146%	10,100 ± 112%	7,300 ± 137%	4,900 ± 107%	10,900 ± 145%	27,100 ± 168%	1.5 ± 200%	2.1 ± 155%
Wyoming	700 ± 131%	100 ± 104%	100 ± 53%	<50 ± 72%	200 ± 79%	300 ± 136%	13.3 ± 141%	1.5 ± 127%
Central Flyway Total	14,400 ± 112%	19,600 ± 69%	7,700	8,900	12,500 ± 126%	36,700 ± 126%		
Arizona	200 ± 120%	700 ± 85%	200 ± 73%	100 ± 55%	300 ± 83%	200 ± 83%	1.4 ± 141%	6.3 ± 101%
California	9,000 ± 62%	10,200 ± 97%	2,400 ± 81%	1,800 ± 131%	6,000 ± 79%	4,100 ± 72%	3.7 ± 101%	5.6 ± 163%
Idaho	3,300 ± 196%	4,400 ± 192%	800 ± 196%	900 ± 179%	800 ± 196%	900 ± 179%	4.0 ± 277%	4.7 ± 263%
Montana	0	19,100 ± 122%	100 ± 132%	4,200 ± 85%	100 ± 132%	5,400 ± 71%	0	4.6 ± 149%
Nevada	400 ± 90%	7,200 ± 186%	100 ± 53%	700 ± 181%	200 ± 63%	800 ± 167%	5.4 ± 104%	9.7 ± 260%
Oregon	8,900 ± 162%	1,500 ± 112%	1,100 ± 113%	1,000 ± 147%	2,100 ± 127%	1,300 ± 118%	8.4 ± 197%	1.4 ± 184%
Utah	5,400 ± 72%	3,100 ± 65%	2,300 ± 56%	1,600 ± 110%	6,200 ± 69%	2,500 ± 75%	2.3 ± 91%	1.9 ± 127%
Washington	0	21,000 ± 146%	0	4,300 ± 132%	0	5,000 ± 116%	0	4.9 ± 197%
Pacific Flyway Total	27,100 ± 63%	67,100 ± 64%	6,900	14,700	15,700 ± 45%	20,200 ± 41%		
United States Total	88,600 ± 42%	194,100 ± 43%	22,000	42,700	53,900 ± 46%	94,100 ± 52%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 19. Preliminary estimates of gallinule harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Gallinule Harvest		Active Gallinule Hunters [b]		Gallinule Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Delaware	0	0	0	0	0	0	0	0
Florida	1,600 ± 140%	3,700 ± 60%	200 ± 105%	400 ± 37%	300 ± 113%	600 ± 47%	8.0 ± 175%	8.8 ± 71%
Georgia	0	<50 ± 189%	1,900 ± 196%	<50 ± 189%	1,900 ± 196%	<50 ± 189%	0	2.0 ± 268%
New Jersey	100 ± 186%	0	<50 ± 186%	<50 ± 134%	<50 ± 186%	<50 ± 134%	7.0 ± 263%	0
New York	0	200 ± 126%	0	100 ± 91%	0	100 ± 106%	0	3.0 ± 155%
North Carolina	0	16,200 ± 193%	0	100 ± 136%	0	1,500 ± 189%	0	246.0 ± 236%
Pennsylvania	0	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0	0
Virginia	0	0	0	<50 ± 188%	0	<50 ± 188%	0	0
West Virginia	0	0	<50 ± 177%	<50 ± 180%	<50 ± 177%	100 ± 180%	0	0
Atlantic Flyway Total	1,700 ± 135%	20,100 ± 156%	2,100	600	2,200 ± 170%	2,400 ± 120%		
Alabama	0	100 ± 140%	0	<50 ± 133%	0	<50 ± 133%	0	1.5 ± 193%
Arkansas	0	<50 ± 188%	0	<50 ± 107%	0	<50 ± 107%	0	0.3 ± 216%
Kentucky	0	0	<50 ± 192%	<50 ± 191%	<50 ± 192%	400 ± 191%	0	0
Louisiana	4,000 ± 141%	3,500 ± 48%	1,100 ± 134%	500 ± 30%	5,400 ± 179%	1,500 ± 51%	3.8 ± 194%	6.8 ± 57%
Michigan	0	100 ± 188%	0	<50 ± 132%	0	200 ± 174%	0	4.5 ± 230%
Minnesota	0	0	0	<50 ± 133%	0	<50 ± 140%	0	0
Mississippi	0	0	0	<50 ± 133%	0	<50 ± 133%	0	0
Ohio	0	<50 ± 188%	0	<50 ± 107%	0	100 ± 124%	0	1.0 ± 217%
Tennessee	0	0	0	<50 ± 189%	0	100 ± 189%	0	0
Wisconsin	0	<50 ± 184%	4,000 ± 137%	<50 ± 92%	32,000 ± 154%	300 ± 108%	0	1.0 ± 205%
Mississippi Flyway Total	4,000 ± 141%	3,700 ± 46%	5,100	800	37,400 ± 134%	2,600 ± 43%		
New Mexico	0	0	0	0	0	0	0	0
Oklahoma	0	0	<50 ± 135%	<50 ± 190%	200 ± 155%	<50 ± 190%	0	0
Texas	0	200 ± 158%	0	<50 ± 93%	0	300 ± 165%	0	4.5 ± 183%
Central Flyway Total	0	200 ± 158%	<50	100	200 ± 155%	300 ± 157%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 19 (continued). Preliminary estimates of gallinule harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Gallinule Harvest		Active Gallinule Hunters [b]		Gallinule Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Arizona	0	0	0	<50 ± 187%	0	100 ± 187%	0	0
California	100 ± 158%	<50 ± 187%	800 ± 133%	<50 ± 132%	1,900 ± 158%	<50 ± 148%	< 0.1 ± 206%	1.5 ± 229%
Nevada	0	0	0	<50 ± 185%	0	<50 ± 185%	0	0
Pacific Flyway Total	100 ± 158%	<50 ± 187%	800	1,100	1,900 ± 158%	1,200 ± 174%		
United States Total	5,700 ± 106%	24,100 ± 130%	8,000	2,600	41,700 ± 121%	6,600 ± 58%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 20. Preliminary estimates of rail harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Rail Harvest		Active Rail Hunters [b]		Rail Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Connecticut	0	400 ± 136%	0	<50 ± 126%	0	<50 ± 134%	0	17.5 ± 185%
Delaware	0	0	0	1,700 ± 191%	0	1,700 ± 189%	0	0
Florida	0	1,500 ± 115%	0	200 ± 59%	0	400 ± 77%	0	8.8 ± 130%
Georgia	1,800 ± 160%	2,200 ± 75%	100 ± 133%	200 ± 54%	200 ± 157%	300 ± 62%	27.5 ± 208%	13.4 ± 93%
Maine	1,800 ± 195%	800 ± 131%	100 ± 195%	100 ± 96%	300 ± 195%	100 ± 101%	24.0 ± 275%	7.0 ± 162%
Maryland	0	0	0	<50 ± 193%	0	100 ± 193%	0	0
Massachusetts	0	0	0	<50 ± 193%	0	<50 ± 193%	0	0
New Jersey	10,200 ± 143%	700 ± 75%	500 ± 89%	200 ± 53%	700 ± 107%	200 ± 66%	22.2 ± 168%	3.5 ± 92%
New York	0	<50 ± 188%	0	100 ± 91%	0	200 ± 130%	0	0.3 ± 209%
North Carolina	0	18,800 ± 183%	0	300 ± 68%	0	1,700 ± 167%	0	71.4 ± 195%
Pennsylvania	0	0	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	0	0
South Carolina	4,600 ± 166%	0	800 ± 184%	0	800 ± 184%	0	5.6 ± 248%	0
Virginia	5,400 ± 77%	2,300 ± 74%	600 ± 118%	200 ± 46%	1,600 ± 134%	300 ± 54%	8.5 ± 140%	14.5 ± 87%
West Virginia	<50 ± 177%	0	<50 ± 177%	<50 ± 180%	<50 ± 177%	<50 ± 180%	2.0 ± 250%	0
Atlantic Flyway Total	23,800 ± 74%	26,700 ± 129%	2,100	2,900	3,700 ± 77%	5,200 ± 85%		
Alabama	0	100 ± 149%	0	<50 ± 133%	0	100 ± 149%	0	2.0 ± 200%
Arkansas	0	<50 ± 132%	0	100 ± 83%	0	100 ± 83%	0	0.4 ± 156%
Illinois	0	<50 ± 187%	0	<50 ± 93%	0	200 ± 133%	0	0.3 ± 209%
Indiana	100 ± 133%	<50 ± 185%	<50 ± 73%	<50 ± 80%	100 ± 79%	100 ± 85%	2.4 ± 152%	0.8 ± 201%
Iowa	12,300 ± 193%	1,200 ± 159%	1,700 ± 134%	1,000 ± 181%	5,800 ± 136%	1,100 ± 171%	7.4 ± 234%	1.1 ± 241%
Kentucky	0	0	<50 ± 192%	<50 ± 191%	<50 ± 192%	400 ± 191%	0	0
Louisiana	0	500 ± 88%	0	200 ± 56%	0	900 ± 78%	0	3.4 ± 105%
Michigan	0	100 ± 141%	0	100 ± 57%	0	400 ± 87%	0	1.1 ± 153%
Minnesota	5,500 ± 115%	1,100 ± 107%	3,300 ± 132%	100 ± 54%	11,400 ± 144%	300 ± 64%	1.7 ± 175%	7.8 ± 120%
Mississippi	0	300 ± 152%	0	100 ± 93%	0	600 ± 168%	0	4.8 ± 178%

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

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Table 20 (continued). Preliminary estimates of rail harvest and hunter activity during the 2021 and 2022 hunting seasons. [a]

	Rail Harvest		Active Rail Hunters [b]		Rail Hunter Days Afield		Seasonal Harvest Per Hunter	
	2021	2022	2021	2022	2021	2022	2021	2022
Missouri	0	1,500 ± 87%	0	200 ± 43%	0	300 ± 49%	0	9.3 ± 97%
Ohio	0	200 ± 104%	<50 ± 193%	100 ± 73%	<50 ± 193%	100 ± 83%	0	2.3 ± 127%
Tennessee	0	0	0	<50 ± 189%	0	100 ± 189%	0	0
Wisconsin	2,000 ± 196%	100 ± 97%	6,000 ± 111%	100 ± 53%	34,000 ± 145%	400 ± 78%	0.3 ± 225%	1.4 ± 110%
Mississippi Flyway Total	19,800 ± 125%	5,300 ± 51%	11,000	2,100	51,300 ± 103%	5,000 ± 49%		
Colorado	0	<50 ± 183%	0	<50 ± 183%	0	<50 ± 183%	0	3.0 ± 259%
Kansas	0	2,500 ± 160%	0	100 ± 81%	0	300 ± 106%	0	39.4 ± 179%
Nebraska	0	100 ± 121%	0	100 ± 73%	0	100 ± 90%	0	1.5 ± 141%
New Mexico	<50 ± 186%	<50 ± 187%	<50 ± 186%	<50 ± 187%	<50 ± 186%	100 ± 187%	3.0 ± 263%	1.0 ± 264%
Oklahoma	0	<50 ± 134%	<50 ± 135%	100 ± 85%	200 ± 155%	200 ± 89%	0	0.4 ± 159%
Texas	0	100 ± 98%	0	100 ± 75%	0	400 ± 123%	0	1.3 ± 124%
Wyoming	100 ± 194%	<50 ± 184%	100 ± 166%	<50 ± 129%	100 ± 142%	<50 ± 144%	0.9 ± 256%	0.5 ± 224%
Central Flyway Total	100 ± 142%	2,700 ± 145%	100	300	300 ± 112%	1,100 ± 58%		
United States Total	43,700 ± 70%	34,800 ± 100%	13,200	5,300	55,300 ± 95%	11,300 ± 45%		

[a] Variance estimates are presented as the 95% confidence interval as a percent of the point estimate.

[b] Hunter number estimates at the management unit and national levels may be biased high, because the HIP sample frames are state specific; therefore hunters are counted more than once if they hunt in >1 state. Variance inestimable.

Table 21. Preliminary estimates of rail harvest during the 2021 and 2022 hunting seasons. Species-specific estimates were derived from 5-year running averages of species composition estimates from the Migratory Bird Wing Collection Survey.

	Sora		Virginia		Clapper		King	
Flyway	2021	2022	2021	2022	2021	2022	2021	2022
Atlantic	1,600	1,900	300	300	21,900	24,500	0	0
Mississippi	19,700	5,300	100	<50	100	0	0	0
Central	100	2,300	<50	400	0	0	0	0
U.S. Total	21,300	9,500	400	700	22,000	24,500	0	0

Appendix A. Names and affiliations of people who coordinate the Harvest Information Program or help provide hunter name and address data to the USFWS.

Seth Maddox, Alabama Department of Conservation and Natural Resources
Joseph Bonnell, Alaska Department of Fish and Game
Larisa Harding, Arizona Game and Fish Department
Susan Porter, Arkansas Game and Fish Commission
Tony Straw, Anthony Gomez, Damian Sivak, and Glenn Underwood, California Department of Fish and Wildlife
Ed Gorman, Colorado Parks and Wildlife
Min Huang, Connecticut Department of Energy and Environmental Protection
Andrew Macy, Delaware Department of Natural Resources and Environmental Control
Andrew Fanning, Florida Fish and Wildlife Conservation Commission
Daniel Brown, Georgia Department of Natural Resources
Tara Reichert, Idaho Department of Fish and Game
Randy Smith and Darren Lawary, Illinois Department of Natural Resources
Karl Eliason and Tanner Little, Indiana Department of Natural Resources
Orrin Jones, Iowa Department of Natural Resources
Mary Becker, Kansas Department of Wildlife and Parks
John Brunjes, Kentucky Department of Fish and Wildlife Resources
Secunda Byrd, Louisiana Department of Wildlife and Fisheries
Bill Swan, Maine Department of Inland Fisheries and Wildlife
Josh Homyack, Maryland Department of Natural Resources
Robert Morley and H. Heusmann, Massachusetts Division of Fisheries and Wildlife
Kristen Shuler and Barbara Avers, Michigan Department of Natural Resources
Margaret Dexter, Minnesota Department of Natural Resources
Ursula Claxton, Mississippi Department of Wildlife, Fisheries, and Parks
Julie Fleming, Missouri Department of Conservation
Payton Schild and Phil Schroeder, Montana Fish, Wildlife, and Parks
Leslie Hershberger and John McKinney, Nebraska Game and Parks Commission
Kimberly Munoz and Russell Woolstenhulme, Nevada Department of Wildlife
Susan Perry, New Hampshire Fish and Game Department
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Doug Howell, North Carolina Wildlife Resources Commission
Chad Parent, North Dakota Game and Fish Department
Andrew Burt, Ohio Department of Natural Resources
Mike Chrisman and Paxton Smith, Oklahoma Department of Wildlife Conservation
Brandon Reishus, Oregon Department of Fish and Wildlife
Ian Gregg and Tammy Klinger, Pennsylvania Game Commission
Jenny Kilburn, Rhode Island Department of Environmental Management
Julie Jarrett and Billy Dukes, South Carolina Department of Natural Resources
Corey Huxoll, South Dakota Game, Fish, and Parks
Jamie Feddersen, Tennessee Wildlife Resources Agency
Kevin Kraai, Texas Parks and Wildlife Department

Heather Bernales, Utah Department of Natural Resources
Jeff Kahn and Andrew Bouton, Vermont Fish and Wildlife Department
Doreen Richmond and Gary Costanzo, Virginia Department of Wildlife Resources
Treg Christopher and Kyle Spragens, Washington Department of Fish and Wildlife
Michael Peters, West Virginia Division of Natural Resources
Jessica Rees Lohr, Wisconsin Department of Natural Resources
Noelle Smith, Wyoming Game and Fish Department

Appendix B. Names and affiliations of waterfowl wingbee participants.

Atlantic Flyway Wingbee

K. Arnorld, Maryland Department of Natural Resources; A. Auger, Florida Fish and Wildlife; J. Bennett, Maryland Department of Natural Resources; R. Bessey, U.S. Fish and Wildlife Service - OLE; C. Cain, U.S. Fish and Wildlife Service - DMBM/BMDM; S. Catino, U.S. Fish and Wildlife Service - DMBM/BMDM; S. Chandler, U.S. Fish and Wildlife Service DMBM/BMDM; R. Conner, Pennsylvania Game Commission; K. Fleming, U.S. Fish and Wildlife Service - DMBM/BMDM; J. Foth, U.S. Fish and Wildlife Service – DMBM; P. Garrettson, U.S. Fish and Wildlife Service - DMBM/BMDM; E. Holmes, U.S. Fish and Wildlife Service - OLE; K. Holmes, U.S. Fish and Wildlife Service; L. Howell, Maryland Department of Natural Resources; N. Huck, Pennsylvania Game Commission; G. Macy, Delaware Department of Fish and Wildlife; C. McDougal, West Virginia Department of Natural Resources; J. Merendino, South Carolina Department of Natural Resources; A. Nelson, South Carolina Department of Natural Resources; P. Padding, U.S. Fish and Wildlife Service (retired); M. Peters, West Virginia Department of Natural Resources; R. Raftovich, U.S. Fish and Wildlife Service - DMBM/BMDM; W. Rhodes, U.S. Fish and Wildlife Service - DMBM/MBSB; B. Rosamond, U.S. Fish and Wildlife Service; C. Smith, South Carolina Department of Natural Resources; B. Struthers, University of Delaware; J. Stempka, Pennsylvania Game Commission; S. Sullivan, Delaware Department of Fish and Wildlife; F. Toledo Rodriguez, U.S. Fish and Wildlife Service; C. Tucker, Ohio State University at Newark/Otterbein University; T. VanWyck, U.S. Fish and Wildlife Service; A. Walter, U.S. Fish and Wildlife Service - DMBM/BMDM; J. Woods, South Carolina Department of Natural Resources; M. Young, Delaware Department of Fish and Wildlife; N. Zimpfer, U.S. Fish and Wildlife Service - DMBM/BMDM.

Mississippi Flyway Wingbee

K. Barnes, Michigan Department of Natural Resources; R. Brinkman, Indiana Department of Natural Resources; C. Cain, U.S. Fish and Wildlife Service - DMBM/BMDM; C. Carlstrom, U.S. Fish and Wildlife Service; S. Catino, U.S. Fish and Wildlife Service - DMBM/BMDM; S. Chandler, U.S. Fish and Wildlife Service - DMBM/BMDM; S. Christian, Kentucky Department of Fish and Wildlife Resources; R. Coluis, Kentucky Department of Fish and Wildlife Resources; J. Corbitt, Tennessee Wildlife Resources Agency; J. Crawford, Michigan Department of Natural Resources; B. Davis, Minnesota Department of Natural Resources; K. Delahunt, Illinois Department of Natural Resources; J. Dooley, U.S. Fish and Wildlife Service; T. Drake, Louisiana State University; K. Dunn, Indiana Department of Natural Resources; J. Froehly, U.S. Fish and Wildlife Service; J. Hanks, Louisiana Department of Wildlife and Fisheries; M. Hintze, Michigan Department of Natural Resources – Law Enforcement; C. Ensminger, Iowa Department of Natural Resources; M. Hurd, Illinois Department of Natural Resources; G. Knutsen, U.S. Fish and Wildlife Service; W. Kroschel, U.S. Fish and Wildlife Service; C. McCarty, Minnesota Department of Natural Resources; N. Olson, Volunteer; D. Rave, Minnesota Department of Natural Resources; T. Shirley, Iowa Department of Natural Resources; C. Smith, Michigan Department of Natural Resources – Law Enforcement; S. Stemaly, Louisiana State University; R. Vinson, U.S. Fish and Wildlife Service; T. Ward, Tennessee Wildlife Resources Agency; G. Wilkerson, U.S. Fish and Wildlife Service - DMBM/MBSB; T. Young, Kentucky Department of Fish and Wildlife Resources; E. Zlonis, Minnesota Department of Natural Resources.

Central Flyway Wingbee

D. Arnold, U.S. Fish and Wildlife Service; T. Bidrowski, Kansas Department of Wildlife, Parks & Tourism; J. Black, Kansas Department of Wildlife, Parks & Tourism; D. Cameron, Kansas Department of Wildlife, Parks & Tourism; S. Catino, U.S. Fish and Wildlife Service - DMBM/BMDM; S. Chandler, U.S. Fish and Wildlife Service - DMBM/BMDM; T. Cooper, U.S. Fish and Wildlife Service – DMBM/Central Flyway; M. Costello, Nebraska Game and Parks Commission; A. Dinges, North Dakota Game and Fish Department; J. Dubovsky, U.S. Fish and Wildlife Service; A. Friensen, Kansas Department of Wildlife, Parks & Tourism; J. Gammonley, Colorado Parks and Wildlife; M. Grovijahn, South Dakota Game, Fish, and Parks; K. Hand, Texas Parks and Wildlife Department; J. Harbit, Kansas Department of Wildlife, Parks & Tourism; R. Herigstad, North Dakota Game and Fish Department; N. Hill, North Dakota Game and Fish Department; H. Johnson, Texas Parks and Wildlife Department; J. Jones, Kansas Department of Wildlife, Parks & Tourism; K. Kraai, Texas Parks and Wildlife Department; K. Kriegel, Texas Parks and Wildlife Department; R. Kroll, Texas Parks and Wildlife Department; T. Liddick, U.S. Fish and Wildlife Service - DMBM/MBSB; D. Lindley, U.S. Fish and Wildlife Service; E. Love, Texas Parks and Wildlife Department; J. Mayhew, Texas Parks and Wildlife Department; T. McClinton, Texas Parks and Wildlife Department; Stephen McDowell, Texas Parks and Wildlife Department; J. McKinney, Nebraska Game and Parks Commission; T. Menard, U.S. Fish and Wildlife Service; R. Murano, South Dakota Game, Fish, and Parks; L. Nuinez, Nebraska Game and Parks Commission; K. Schoonover, Oklahoma Department of Wildlife Conservation; P. Smith, Oklahoma Department of Wildlife Conservation; R. Stutheit, Nebraska Game and Parks Commission; M. Szymanski, North Dakota Game and Fish Department; P. Thorpe, U.S. Fish and Wildlife Service - DMBM/MBSB.

Pacific Flyway Wingbee

C. Brady, California Department of Fish and Wildlife; C. Cain, U.S. Fish and Wildlife Service - DMBM/BMDM; R. Cain, California Waterfowl Association; M. Carpenter, U.S. Fish and Wildlife Service; S. Catino, U.S. Fish and Wildlife Service - DMBM/BMDM; S. Chandler, U.S. Fish and Wildlife Service - DMBM/BMDM; L. Cockrell, California Department of Fish and Wildlife; S. Cordes, California Department of Fish and Wildlife (retired); T. Dimarzio, Alaska Department of Fish and Game; J. Dooley, U.S. Fish and Wildlife Service; K. Fleming, U.S. Fish and Wildlife Service - DMBM/BMDM; G. Gerstenberg, California Department of Fish and Wildlife (retired); A. Gonzalez, California Department of Fish and Wildlife; M. Guttery, Alaska Department of Fish and Game; J. Hazen, Oregon Department of Fish and Wildlife; A. Kleinhenz, Washington Department of Fish and Wildlife; J. Laughlin, U.S. Department of Agriculture - APHIS/Wildlife Services; B. Lausch, U.S. Fish and Wildlife Service; V. Loverti, U.S. Fish and Wildlife Service; T. Lum, Oregon Department of Fish and Wildlife; C. Moore, Washington Department of Fish and Wildlife; A. Mott, U.S. Geological Survey; S. Norman, California Department of Fish and Wildlife; P. Patel, California Department of Fish and Wildlife; B. Plumhoff, U.S. Fish and Wildlife Service; W. Rhodes, U.S. Fish and Wildlife Service - DMBM/MBSB; O. Rocha, California Department of Fish and Wildlife; N. Saake, Nevada Department of Wildlife (retired); J. Sands, U.S. Fish and Wildlife Service - Region 1; W. Schock, U.S. Fish and Wildlife Service; R. Shafique-Sabir, U.S. Fish and Wildlife Service; D. Speten, Oregon Department of Fish and Wildlife; C. Stanley, California Department of Fish and Wildlife; D. Stitts, California Department of Fish and Wildlife; L. Swanson, Idaho Department of Fish and Game; A. Switalski, Idaho Department of Fish and Game; K. Walton, Oregon Department of Fish and Wildlife; R. White, California Department of Fish and Wildlife; M. Wilson, Washington Department of Fish and Wildlife; H. Wilson, Alaska Department of Fish and Game; B. Wyatt, California Department of Fish and Wildlife.

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